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ORIGINAL ARTICLES.

MEDICAL PROGRESS.

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My time is so limited that I can only make a very slight review of the practice of medicine, showing the progress made during so many years.

The present time can boast of great progress; yet we have much to regret as to the failures to come up to the standard of olden times in many respects. We should look well to this.

Medicine has its history, its philosophy, its politics, its literature, of which the world at large knows nothing. It has its arts and occupations; it has its organizations and institutions, and dissentions, not always amenable to logic or to the learning of the schools. In ethics, traditions and superstitions it dates anterior to the Church. Being in use before the civil law, is it any wonder that the members of our profession, drawn together by such ties, should unite as a brotherhood? Such has ever been their course. The Druid of early Gaul and Britain, the Asclepiades of Greece, the Priests of Egypt, the Lamas of Central Asia, the Fraternities of the Middle Ages, and up to this time medical societies and colleges in our own and other countries devoted to the healing art, are the proof of this. Wherever freedom has existed, or tyranny would permit, organization and development have been the rule of our profession.

With these facts before us our duty is plain. Continue this good work and improve every day, and show ours to be a progressive profession. Let us look back for ages and review its history up to our time, that we may the better understand, and may know how far we have advanced, and to what we owe our progress. The labor before us is, how we can best elevate the profession for those who are to follow.

Among the early Egyptians were a large and influential body of priests, who received about one third of the income of the nation. There were several orders of them. A majority of them were skilled in medicine, and, as many supposed, practiced gratuitously among the people. (See Schultze, page 24, from Diadorus.)

"Each physician applies himself to one disease and not more." Every place was full of physicians; some for the eyes, others for the head, some for the teeth and others for internal diseases —what we call specialists. The embalmers were also of this class, and their skill and standing are generally respected to this day. The skill of the Egyptian priests or doctors made them very popular, not only among the Egyptians, but the rulers of the surrounding nations called for them. Cyrus sent for the ablest oculist of Egypt. We learn from Aristotle that the practice of the Egyptian priests was in conformity with a law prescribed, yet the physicians were allowed to alter the mode of cure, which the law prescribed to them, after the fourth day, but if they did sooner they acted at their own peril.

The youth who were destined for the profession, if not the sons of the initiated, were not allowed to begin until after the completion of their preparatory education, from their seventeenth to their twentieth year. But the sons of the physicians began earlier, and with both the course of training continued to about their twenty-fifth year. The admission or initiation of those who had passed the preliminary examination consisted of the three grades.

The ceremony of the first grade was called illumination, or the study of theories, logic and philosophical or abstract principles and rites. The second grade was styled inspection, which included the looking on or practical studies, or the examination of diseases in the houses and at the bedside. The third grade, which was the end of their study, and the design of the other two, was called the binding of the head, or coronation. The binding of the head was equivalent to what we call graduation, and never took place before the completion of the fifth year. It will be remembered that not all presenting themselves for admission as students were accepted, as a thorough examination was made as to their preliminary qualifications and education, their general character, moral and intellectual. They must be perfectly free from all physical deformities, and have a clear and good voice and no impediment of speech.

We are informed by Hippocrates, in reference to his profession, that "Things which are sacred are to be imparted only to sacred persons," and that "It is unlawful to impart them to the profane until after their initiation into the mysteries of the science." With reference to purification, or the training which should precede illumination, he says: "Whoever is to acquire a competent knowledge of medicine ought to possess the following advantages: A natural disposition, a favorable position for study, early tuition, love of labor and leisure." Writing to his son, the author of the Hippocratic Letters says: "Give due attention, my son, to geometry and arithmetic, for such studies will not only render your life illustrious and useful to your fellow beings, but your mind more acute and perspicacious in arriving at fruitful results in everything pertaining to your art."

The candidate having passed the first ordeal of preparation, and commencing the ceremonies of illumination, was obliged to subscribe to the oath, which was a formula analogous to that which was enjoined among the Pythagoreans, and was in the following words: "I swear by Apollo, the Physician, by Æsculapius, by Hygeia, by Panacea and all the gods and goddesses, that according to my ability and judgment, I will keep this, my oath and stipulation, to reckon him who teaches me this art equally dear to me as my parents, to share my substance with him and to relieve his necessities if required; to look upon his offspring on the same footing as my own brothers, and to teach them this art, if they shall wish to learn it, without fee or stipulation, and by precept, lecture and every other mode of instruction. I will impart a knowledge of this to my own sons, to those of my teachers and to my disciples, bound by stipulation and oath according to the law of medicine, but to none others. I will follow that system of regimen, which according to my ability and judgment, I consider for the benefit of my patients, and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to any one, if asked, nor suggest any such counsel; and in like manner I will not give a woman a pessary to produce an abortion. With purity and holiness I will pass my life and practice my art. I will not cut persons laboring under a stone, but will leave this to be done by men who are practitioners of this work. In whatsoever house I enter I will go into them for the benefit of the sick, and will abstain from any seduction of females and males, of freemen and slaves. Whatever in connection with it I see or hear I will not divulge, as reckoning that all such should be kept a secret. While I continue to keep this oath inviolate, may it be granted to me to enjoy life and the practice of my art, respected by all men and at all times; but should I trespass and violate this oath, may the reverse be my lot." See Adam's Hippocrates, Vol. II, page 779.

The course of education among the Asclepiades was in conformity with the national habits. After subscribing to this oath the pupil was allowed to proceed to the business of illumination, which consisted of the committing to memory certain traditions and precepts, in listening to his instructor, in the description and management of diseases within the temple or at the bedside of the sick, and combining with the knowledge thus obtained a general acquaintance with the rules of health. Next in order came the business of inspection. It immediately preceded coronation; this had relation to practical subjects, probably the treatment of diseases under the immediate supervision of the instructor. The ceremony of coronation took place at the completion of the term of study, as the ceremony of graduation takes place in our colleges at the present time.

In those days medicine was principally taught orally or by tradition and example, therefore the requirements could not have been very extensive. This main study of the treatment of acute diseases was the regulating of the diet, etc. Epidemic diseases were looked upon as of divine dispensation, with which they dare not interfere. A knowledge of the general rules of health and the influence of diet, exercise, climate and locality attracted much of their attention. Why should not the same attention be paid to the subject at this day?

In the management of injuries and external diseases they were but little behind those of the present day. Their remedial agents were the lancet, active cathartics, emetics and diuretics, cataplasms, ointments, escharotics and mechanical appliances. They had but little knowledge of anatomy and physiology; they did not interfere to any extent with chronic diseases.

Up to the days of Herodicus, one of the teachers of Hippocrates, he recommended in chronic diseases, exercise and regulated diet. This innovation was very unpopular. Plato upbraided him for his course, and declared that no attempt should be made to cure a thoroughly diseased system, and thus continue a long and miserable life to the man himself, as well as to his descendants. Asclepius did not think a man ought to be saved who could not live in the ordinary course, as he would be of no service to himself or the State.

Hippocrates can properly be called the father of the medical profession. He was born 460 years before the birth of Christ; was a few years older than Plato and younger than Socrates. He received his professional education under his father, Heraclides, at Asclepion of Cos, in his youth, at Athens and other places. He had the

instruction of the best teachers in science and philosophy.

Hippocrates in his book, "Air, Water and Places," inquires into the effect of particular exposures of the seasons and their vicissitudes; the influence of winds and properties of water. He refers to diseases prevalent in different places and during different times of the year. He calls attention to diet and exercise, showing how excess or deficiency in either may prove the cause of disease. If practitioners of this day would only follow this noble example and in all cases look well to the surroundings, location, diet, water used, drainage, cleanliness, as well as habits of the patients, it would do great good.

From the time of Hippocrates and immediate followers to the present time, a system of vacillations and changes in the theories and practice of medicine and surgery has been going on. Every day we see in print some new invention or theory suggested by members of the profession upon the diseases of the day. One cures all diseases by cathartics and emetics, claiming they are generated or produced by accumulations in the stomach and bowels; others that all diseases can be cured by heat, as one specialist of the kind advocated, giving as his reason, cold is death and heat is life, therefore as long as we can keep up the heat in the body the patient will live and must rally under its influences. Others, from the days of old to the present time, spring up to cure all diseases by bleeding, frequent and profuse depletion, and thus relieve congestion of different parts of the body from excess of blood. Aretæus, who had written eight books, was an advocate of the free use of hellebore as the great remedy for nearly all diseases. He also advo cated the system of drastic medicines, and was among the first to recommend cantharides for blistering. Sydenham, born in 1624, differed greatly from his predecessors in their modes of treatment. He published his work entitled "Methodus Curandi Febris," in 1666, and it was he that first directed cool air and other antiphlogistics in the treatment of small-pox and eruptive fevers.

The Brunonian system was based on the views of Dr. John Brown, of Edinburgh. He arranged diseases under two divisions, sthenic and asthenic. He maintained that all agents operate on the body as stimuli, so we had only to increase or diminish the force of these according to circumstances. At the head of stimulants he places wine, brandy and opium, in the recommendation of which he is very liberal, and especially betrays his partiality to them by assertions contrary to universal experience. He found them in his own person the best preventative of gout, and is said to have prepared himself for his lectures by large doses of laudanum in whisky, and thus aroused himself to a degree of enthusiasm bordering on frenzy. The novelty and imposing simplicity of his doctrines procured him at first quite a numerous class, but being irregular in his attendance, and his habits of intemperance increasing, his class fell off by degrees, and he was at length so embarrassed as to be obliged to leave Edinburgh in 1786. He then settled in London, but met with little success, and in about two years after died. His opinions found many supporters in this country as well as in others, but they appear to have nearly fallen into deserved oblivion.

Bærhaave's system was founded on the teaching of Dr. Herman Bœrhaave, who claimed to have selected his mode and manner of treating diseases from all systems and theories of those that preceded him, consequently he was called or styled an Eclectic.

As we have seen heretofore in this report, many of the old practitioners depended greatly upon depletory measures, particularly blood-letting. In most of the fevers of that day, as we are told by Rush and others, the sheet-anchor in the treatment was considered to be bleeding and drastic purgatives. This was kept up by one class and denounced by another, we may say, up to within the last forty or fifty years, since which time we have made great progress in omiting the use of the lancet. In scarlet fever bleeding was the practice of many of our most renowned physicians.

My own recollection of scarlet fever dates back to when I was a boy of seven years. Dr. Dana, a physician of high standing of Friendship, N. Y., and my father's family physician during a scourge of that disease, used the lancet freely in all cases, except two boys. The reason they were not bled the doctor and mother, in each instance, were unable to hold the two bad boys as they kicked, screeched and hollowed, arousing the neighbors, when the doctor said: "We will have to give it up; they will die but I cannot help it, we have done all we can." They recovered without any sequel while the other cases died; and here is one of the boys.

My first year's practice of medicine, in 1845, was in that village, and the old doctor referred to had retired from practice and spent much of his time in our office, and often repeated and laughed about his experience in the cases alluded to, stating that from that time he never used the lancet in scarlet fever.

In my first practice and experience it was considered malpractice to omit bleeding in pneumonia, pleurisy and diseases of like character. I shall never forget the last case I bled and the first I did not bleed in pneumonia. April 12, 1846, I was called to treat a young man with pneumonia, in Ridgway, Pa., and as I had been educated a physician in the state of New York and my first practice had been there also, where

the thumb lancet was always used, I took it to bleed the patient, but all the friends refused to have it used, calling it a "butcher knife," and, unlike my usual decided position, I stepped into a store and bought a spring lancet,—which was not considered a surgical instrument—and snapped it several times without effect on account of fear, as I could not guide it, but succeeded at last in bleeding the patient. About an hour after this I was called to see another young man with the same disease, which was prevalent at this time—as the raftmen had exposed themselves to the inclemency of the weather going down the river. I drew my lancet and met with the same positive protest against the use of it; so I took the spring lancet the second time and let it snap. The blade broke and flew across the room. I went to the door and threw the balance of it as far as I could, and said if he could not be bled with my instrument he might go without and die, as I was not responsible.

Under a treatment of small doses of ipecac and the solution of antimonium tararizatum, and free bathing with salt water, with thorough friction of the body, three times a day, in two and one-half days my patient expectorated easily and freely, the surface was generally moist, and in five days was about his room, and in a few days well; while the one whom I bled, equally as stout and robust a young woodsman, in six weeks began to walk out a little on pleasant days. From that time to the present I have never resorted to bleeding in pneumonia, nor in any case save apoplexy or puerperal convulsions, or where immediate danger required it.

In 1793-94 Dr. Benjamin Rush, Professor of the Institutes and of Clinical Medicine in the University of Pennsylvania, took bold grounds against yellow fever being caused by contagion. He says: "I expected the fevers of the summer and autumn would be of a violent and malignant nature. I was the more disposed to entertain this opinion from observing the stagnating filth of the gutters of our city; for the citizens of Philadelphia, having an interest in rejecting the proofs of the generation of the epidemic of 1793 in their city, had neglected to introduce the regulations that were necessary to prevent the production of a similar fever from domestic putrefaction.

"From none of them had I observed the fever to be propagated by contagion, and therefore I took no steps to alarm my fellow-citizens with the unwelcome news of its being in town.

"On the 25th of the month, 1794, two members of a committee appointed by the Government of the State for taking care of the health of the city, called upon me to know whether the yellow fever was in town. I told them it was, and mentioned some of the cases that had come under my notice; but informed them at the same time that I had seen no case where it had been contagious.

"As I considered the filth of the gutters and the stagnating water in the neighborhood of the city to be the remote causes of this fever, I advised the committee to have them both removed, and thereby to prevent the spreading of the disease."

Dr. John Brown, in his writings on the subject of yellow fever in America, says: "It appeared six different times, and all about the same time in the year, about the first to the middle of August, and declined or ceased about the middle of October.

"In the years 1732, 1739, 1745 and 1748 in Charleston; in 1791 in New York, and in 1793 in Philadelphia, and in every locality and season it has been proved beyond a doubt that the disease was caused by the influence of the weather, or the vicissitudes or surroundings of that particular locality, and not from contagion. Let a person in the height of a pestilential disease be removed from the atmosphere which occasioned it to one more pure, he will communicate the infection to no one." He then quotes Dr. Rush in speaking of yellow fever in Philadelphia, when Rush says: "This fever did not spread in the country, even carried there by persons who were infected and afterwards died with it." This position taken by Drs. Rush, Brown and others of olden date was fully sustained during the last scourge of yellow fever in the southern cities. Refugees from the south were received in many cities and towns of the north, middle and western States, but were not allowed to bring with them any of their household goods or clothing.

The following preamble and resolutions were unanimously passed by the Mississippi Valley Medical Association, held in St. Louis in September, 1888:

"WHEREAS, The existing deplorable condition of a considerable portion of our southern territory, induced by the spread of epidemic disease and the alarm thereby caused; believing it to be the duty of this Association, in view of the pressing exigency, to take every step possible to allay panic and reassure alarmed communities and states; therefore, be it

Resolved, That a committee of not less than five persons be appointed by the president to consider the present situation and report to this Association at a subsequent session what action in their judgment should be taken to secure the desired end."

The committee on yellow fever presented the following report, which was unanimously agreed to:

Resolved, That it is the sense of this meeting that yellow fever is not contagious in the ordinary sense of the term; that it cannot be communicated from the sick to the well.

"That the mildness of the present yellow fever invasion and lateness of the season, warrant us in strongly deprecating the fear now existing in many southern communities, the present rate of mortality being not greater than that which ordinarily obtains in typhoid fever.

"That the self-imposed quarantine regulations now in force in the States north of the infected districts are not

only absurd, but inhuman and unworthy of the age in which we live.

"That quarantine regulations, to be effective, should apply to baggage, clothing and effects, rather than to the person of the individual.

"That when such effects come from infected districts they should be destroyed by fire, and the owner reimbursed from public funds.

"That cities and towns to the north of such districts and upon lines of travel may safely provide hospitals for the reception and care of the sick. George Homan, M. D., Missouri; J. A. Larrabee, M.D., Kentucky; David S. Booth, M.D., Illinois; J. D. Griffith, M.D., Missouri; G. A. Collamer, M.D., Ohio; George N. Kreider, M.D., Illinois; A. P. Waterfield, M.D., Tennessee, and A. W. Williams, M.D., Hot Springs, Arkansas, Committee."

Being a member of that Association, I was present and greatly interested in the candid, fearless and able discussion that followed those resolutions. Many of the members were well posted in the disease, having had practical experience; while the secretary of the Illinois State Board of Health was present, being on his way home from a full investigation of yellow fever in the south, and delivered a very able and clear address before the Association on the subject.

On my way home from St. Louis, September 28, I visited Louisville, which city had opened hospitals for the reception of yellow fever patients brought from the infected places south. Those sick were placed in the hospital without any household goods, or clothing worn by them at home, and no person, nurse or physician attending the cases had the disease in any of its forms. Of course I visited them while there to post myself in the disease.

We have a great craze on other diseases which are now pronounced contagious. Phthisis pulmonalis, pneumonia, and many other diseases of like character are pronounced contagious, yet all practitioners of experience must agree that they are not propagated by contagion.

For the last thirty years many of our most earnest medical gentlemen insist that diphtheria is a contagious disease, and in place of educating our citizens to look well to cleanliness of the surroundings and purity of the air breathed, the water for drinking, cooking, etc., as well as to the purity and healthy condition of food used, they are taught to shut themselves up in their damp, musty houses and not allowed either good air or sunlight, and no one allowed to go into their dwellings, to give aid and assistance to the sick and their families, and also public funerals prohibited. Why all this? Why not, on being called to a house where diphtheria exists, at the very first investigate and examine the house from garret to cellar and all the surroundings of the house, supply of water, outhouses, drainage, etc.? We all know that this disease is a filth disease, caused by bad air, water and food, one or all, and that it is a constitutional or blood (poison) disease. I will refer to the condition of one small town of about 200 inhabitants.

In May, 1876, I was called to B——, by Dr. H., to consult and advise with him in his course of treatment of diphtheria. On my arrival I found that eighteen had died and twenty-two were sick. The treatment in use was mercury internally and the local use of tincture of iron to the membrane. This treatment was at once discontinued and my usual constitutional treatment adopted—chlorate of potassa, chloride of sodium, bicarb. of soda, quinine, iron and stimuli, as the case indicated; also free bathing, etc.

The great mystery to be solved by the doctor and citizens was where the contagion came from, as there was no other case of diphtheria in the surrounding country, and no one had been away or any stranger known to have visited the place during the spring. After a preliminary inspection of the location, to settle all questions, I called them to a mill-race leading from a dam, situated above the town, to a saw and flouring mill at the river below. This dam was used to hold water for the mills, and logs were floated down the stream and held in the dam to be passed out in the race as required. The mills required repairs and the water had been shut off from the race, which was close by and parallel with Main street, in the bed of which were found rotten wood, dead animals, in fact all kinds of filth and vegetable matter in an advanced stage of decomposition. The air was filled with noxious odors, which were almost intolerable. Their attention being called to this condition of things, all question as to the cause of contagion was considered settled. I at once directed that this mass of filth be raked up and burned, the bed of the race strewn with fresh lime, fences, outbuildings and cellars whitewashed, and quicklime placed in the rooms of each house and allowed to air slack. The result: One of the twenty-two patients then sick died, one other case developed about this time, who, with all the others, recovered. Of a total of forty-one cases nineteen died, and twenty-two recovered.

We can truly say the same of cerebro-spinal meningitis. Are we progressing in thus ignoring science and every principle of hygiene?

Many other diseases of this day are treated in the same way, by depletion and local means, as if they were merely a local disease, and calomel, mercury and opiates used when tonics, stimuli and constitutional means should be employed during the entire course. Let us think, use reason and act at once.

Among the medicines resorted to in many cases by the old practitioners was the free and excessive use of opium. It was freely given in nearly all cases, especially inflammatory diseases, and was recommended strongly in the treatment of yellow and other fevers. In the old Brunonian system it was carried to a fearful extent. Dr. Parr says the effect of opium on the living body

has been represented in very opposite contradictory terms. It has been keenly disputed whether it was a stimulant or a sedative. If by stimulant is meant a medicine which, by its action on the stomach, will increase the heat of the body and quickness of the pulse, it by no means deserves the title. If given to a healthy person the pulse and heat are both lowered, and if the dose is increased nausea, faintness and headache follow, when the influence of the medicine is at an end. This brings it within the class of narcotics. When the change in the ideas of the circulating fluids was abandoned it was doubted whether it acted upon the stomach or heart, and the second Monroe has published some experiences which seem to say that its chief effect is on the latter (heart). This, however, only proved that when opium is injected into the sanguiferous system it produces no effect at all until it reaches the heart.

If fevers consist in debility and irregular action, and opium is a sedative, producing also irregular action, it will appear that no medicine is so unsuitable to the disease. This was the opinion of Dr. Parr.

All authorities agree that opium acts as a sedative or narcotic. It has been given to allay pain, produce stupor and sleep, but the drug was used promiscuously by the old practitioners of one hundred years or more ago, and now, more especially, its use is being revived to a fearful extent. It is employed by practitioners of respectability, I may say in nearly all the cases they meet with. It is used to save trouble of investigating and examining into the cause, remote or exciting, of the disease they may be called to treat. Patients have been kept under the influence of hypodermic injections of morphia, not only for days but weeks, without investigating the cause of sickness. When visiting a patient they should never leave the bedside until satisfied what indications they have to meet, and what will meet the indications and thus remove the cause, and not stupefy or paralyze the actions of the heart and all organs of the body, and deprive them of their ability to perform what nature has designed them to perform. It is time the profession frown upon such evasions of duty. Daily I am called to see patients that have been under the treatment of either opium, morphia or hydrate of chloral by the mouth, of morphia or cocaine by hypodermic injections, without any regard to the cause of the disease or the effects that these drugs are producing. Some years ago I was called to see a patient who had been treated about three months for what they called rheumatism of the knee joint, by a constant course of hypodermic injections of morphia at the knee. I investigated the leg above the knee and found the patient suffering from carious bone. I at once cut down to the femur on the inside of the leg and obtained a free discharge of thick offensive pus. By scraping the bone thoroughly, carefully and freely, using washes and disinfectants, it soon healed from the bottom, and up to this day he has never had any pain or further trouble with the knee joint. I knew a case about three years ago of a young man who had cut his leg while working in the woods. This cut was filled with morphia before dressing it, which of course produced stupor, and he remained unconscious, constantly rolling his head and moaning until he died.

The effects and results of the abuse of opium could be multiplied from my own experience to pages, but will refer you to what Pomet says: "Its effects are always narcotic, whether used externally or given internally; given in clysters it operates quicker than by the mouth; applied to the eyes and ears, it has caused blindness and deafness, and a plaster of it on the head has caused death. It ought not to be given to plethoric persons without first bleeding them, nor at all to women at time of the menses, etc., nor even upon a full stomach, for it prevents digestion." (Pomet's History of Drugs, Fourth Ed., page 216, A.D. 1748).

We have quoted what Parr says on the use of opium, also, and in this it will be seen we have made but little progress, but are falling back into a worse condition and habit of practice than has existed in all the history of medicine. Can it be reformed? Can we progress from this time onward?

At this time the country is crowded with those practicing medicine under some system they claim to be the only one founded on reason and science. The Thompsonian practice was advocated by Thompson, of New England. He claimed the human body is composed of four elements, earth, air, fire and water, and that metals and minerals are in the earth, and these materials being taken from the earth, have a tendency to carry all back into the earth who use them; and as the tendency of all vegetables is to spring up from the earth, and therefore to keep mankind from the grave, all medicine must be vegetable. We all remember how they scattered their hot drops, No. six, and vegetable composition, over the country.

Homœopathy is a system which maintains that disease in the human body must be cured by producing other disordered actions of like kind (similia similibus), and this is to be accomplished by infinitesimal doses, and really nothing but sugar of milk at that. The whole practice and system is visionary.

Hydropathy is another system, which is founded upon the treatment of all diseases with water, packing in wet sheets, etc. Yet this also has its followers and advocates.

Vitapathy, Vita—Life vs. Pathy—Disease. Of later years we have this system, which puts on more nonsense than all the others. Its advocates say they have the only true system of health and

life, and the American Health College in Cincinnati gives the highest diploma of any college in the United States.

There are many new things in Vitapathy. For instance, "our electro-magnetic warm air bath surpasses all hot springs, magnetic springs, electro-thermal, Turkish, or any kind of vapor, heat or electric baths, as it combines all those and much more, uniting oxygen, heat, light, electricity and vital magnetism all in one luxurious, cleansing, purifying, invigorating and vitalizing process, developing youth, invigorating age, increasing beauty and prolonging life. This bath is used mostly for colds, rheumatism, neuralgia, fever and ague, malarial and bilious diseases, nervous and chronic diseases generally. Healing by the laying on of hands, together with the new discoveries in Vitapathy, makes a grand, successful, powerful treatment. This is what we practice and what we preach, and with a full knowledge and faith in this doctrine can annihilate disease, banish wrong, open wide the gates of life, break down the walls of hell, kill the devil, perfect our manhood and make this world a paradise."

The above is a slip cut from one of the notices announcing their system, etc.

Eclectic practice has had its day under that name. They claimed to elect the best means used to treat disease from all systems up to their day. Eclectics were, and are now, nothing more or less than a combination of the old botanic or root doctors and Thompsonians, and under this name, eclectics, their school or so-called college for this country, was at Cincinnati. Agents often canvassed the country with diplomas filled, except the name of the person they graduated, and filled them out for those that would pay twenty-five dollars.

Botanic System. There were also persons who claimed to be doctors and treat diseases with roots, herbs and barks.

When I came to Elk county in 1846, four were in active practice. They usually took with them a school basket filled with "catnip" (nepeta cataria), "mullen leaves" (folia melezomun), "smart weed" (polyganum hydropiper punctatum), "boneset leaves" (folia eupatorium perfoliatum), "mandrake root" (rad podophyllum peltatum), "butternut bark" (cortex juglans cinerea), "pennyroyal" (mentha pulegium), "tanasia or tansy" (tanacetum), "dandelion root" (leontodon taxaxacum rad), "skunk cabbage root" (rad dracontium foetidum), "elecampane root" (rad inula helenium), "cranesbill root" (rad geranium maculatum), "pipsissiwa leaves" (folia chimaphila umbellata), and a host of other weeds and roots.

Christian Science, etc. Every age has its delusions and their victims, including our own, notwithstanding the growth of knowledge and the rapid and boasted advancement we are making in our system of education. Some of these delusions, frauds and humbugs are now perpetrated under the shelter of the words, "Christian Science." This system of concentrated nonsense has been invading our country and has its followers. There are different schools, and they do not agree in all particulars, but unite in one thing, there is no such thing as matter; all is "mind." They contend all disease is an error; that we are not sick, but think we are sick; that we do not die, but think we die. Strictly speaking, there is no such thing as "disease." What men imagine to be disease is an error of their own minds. Then comes the Faith Cure; a class of pretenders who have many followers and believers, who forsake their physicians at home, allow themselves to be humbugged for a time by what are called "Faith Cure Doctors." In every case I have known, patients suffering from disease, return to their homes for treatment.

We also have Pasteur, Brown-Séquard, Koch, and others, with their "isms and cisms."

By referring to the early writers, there was a class of physicians then that we of this day call specialists. Each physician applied himself to one disease and not more. This system in days of the limited facilities for medical education, especially in anatomy, physiology, materia medica, therapeutics, chemistry, etc., was very proper, but at this time every student should be thoroughly educated in all the diseases of the body, all the surroundings of these diseases, and be ready to meet each indication.

In the country we see the evil of the present system of specialism to a greater extent than is seen in cities. Daily we meet with cases sent to cities for special treatment, such as affections of the eyes or the ears, headache, rheumatism, tumors, ulcers, lungs, rectum, bowels, stomach or liver, and female diseases, and returned after a long stay with no improvement, and often in a much worse condition than when they left home. Why? The treatment was for a symptom and not the disease. They extensively advertise their specialty. Some call themselves cancer doctors and draw many to them for that disease, and finding a tumor on some part of the body, pronounce it cancer and use the knife to remove it, when if they would stop and think a moment and call to mind the cause of these tumors and ulcers, would never use the knife until the system was prepared by constitutional treatment. In a malignant tumor or ulcer, why remove the symptom and leave the cause to reproduce it? They do, however, and take their money. We all know if they are cancers they will in every case return, in due time, unless treated by some regular physician constitutionally, thus purifying the blood generally by getting the malignant disposition of the body eradicated. Another class of these doctors use caustics and plasters,

as they say, to eat them out, with the same or worse results. We should remember what Hippocrates says on cancer: "It is better not to cure hidden cancers, for they who are cured quickly perish; whilst they who are not cured live longer." Then why tamper with human life, under the name of "Specialist?"

Thus it will be seen that the medical profession at this day have the same trouble with quacks and quackery as is referred to in the writings of Hippocrates, Herodicus and others, when it was said: "Even at this day there were designing men who were physicians only in name, and who gave themselves up to disreputable practices; against whom the regularly initiated had no redress." Are we not placed in somewhat the same condition, and with no other hope or redress than to stand together as a band of brothers, in our regular Medical Society, County, State, District, American and International Medical Congress, and advocate the elevation of the profession, not by legislation of States or Congress of the United States, but by requiring a superior education of all applicants for "illumination, inspection and coronation," also honesty of purpose and devotion to their duties, etc.? Thus standing together as one educated body, let us frown upon every effort to bring down our high standing to the level of those before referred to. If we expect protection by legislation, remember laws passed by the legislature or Congress of one year may be undone in another, and we must expect to be ever in doubt as to our standing.

How are we to elevate the profession of medicine and surgery? Is it to be done by passing laws reflecting upon the honesty and ability of our medical colleges, and declaring the diplomas granted by them worthless and to be treated as so much waste paper?

The several States have chartered medical colleges in their respective States, and granted them full power to receive students and graduate them, or confer the degree of Doctor of Medicine, which diploma should be good all over the world. The requirements of these colleges for receiving students and conferring the degree of Doctor of Medicine, etc., should be the same in every State of the Union, and should be marked out by the American Medical Association, and all colleges required to fully carry out the rules and requirements, and see them faithfully enforced as follows: The American Medical Association directions to be strictly observed by the medical colleges of the several States. To regulate the study of medicine and surgery, and defining the duties of students, preceptors and the medical colleges. Be it resolved, by the American Medical Association at its annual meeting held at——on——day of——month, A. D.——, and it is hereby declared by the authority of the same, that from and after the first day of——month, the medical colleges of the United States of America shall require all students of medicine and surgery to present to the Dean of the college he or she proposes to attend, a sworn statement that he or she commenced the study of medicine and surgery in the office of——, M.D., practicing physician and surgeon, on the——day of——A.D.——, and studied two years in his office and under his directions and instructions. Also the student to present an affidavit of his preceptor: I,——M.D., practicing physician and surgeon of the——, County of——State of——, having made a full and thorough examination of——, of——, of——, and State of——, whose name is written in his own proper handwriting on the margin of this certificate, do hereby certify that he was found well qualified in respect to moral character, learning and ability to be admitted as a student of medicine and surgery, and on——day of——, A.D.——, he was duly received in my office as a student of medicine and surgery, and continued under my instruction and inspection for the term of two years to the——day of ——A.D.——, and during that time has proved himself in every way worthy.

Signed,———M.D.,
Practicing Physician and Surgeon.

Sworn and subscribed before me this——day ——A.D.——.

In the country it is well known that a young man working in the woods or acting as clerk, at the time of the opening of a course in a medical college, leaves for college and returns at its close, begins the work he was engaged in before, and finally returns an M.D. He is recorded as a student of Dr.——, whom, as is frequently the case, the doctor never knew.

Students should be required to read the medical authorities under the inspection and direction of their preceptors, and thus be able to understand and know what our professors are talking about. Shall we allow our medical colleges to be treated as frauds and humbugs? All of which is respectfully submitted.

DIPHTHERIA.—H. Wolf (*Fortsch. d. Med.*, 1890, 8, 954) has used a combination of menthol with sugar in the proportion of 1 or 2 to 20 in the treatment of diphtheria. This powder he rubs upon the parts affected by the disease. The deposit often sticks to the brush and is removed by it. The brush is then again carried into the throat and the menthol-sugar thoroughly rubbed into the part. This procedure is carried out two or three times daily. Even by the second or third day the dirty-gray appearance disappears, and a clean excavated ulcer remains which quickly heals under the continuance of the treatment. To control the fever he employs antipyretics.

ANTISEPTICS.

Read in the Section of Practice of Medicine and Physiology, at the Forty-second Annual Meeting of the American Medical Association, held at Washington, D. C. May, 1891.

BY HIRAM CORSON, M.D.,
OF PLYMOUTH MEETING, PA.

There has been a decided tendency for the past few years on the part of persons affected by the antiseptic and germ theories, to make it imperative on those who practice midwifery, to obey the rigid antiseptic rules laid down by teachers. I saw somewhere that in a discussion on the necessity for antiseptic measures during parturition, and their continuance during the lying-in period, a prominent physician said "that if he should be called on to testify, in a prosecution for malpractice where death had occurred during confinement and antiseptic precautions had not been used, he would certainly testify that it was criminal malpractice." This was an alarming threat, as it placed practitioners of midwifery in constant peril, and it impelled me to speak to our County Medical Society about it, and to urge them to make some preparation for such an emergency. The Society then appointed me to procure from practitioners of long experience—men who had attended hundreds, and even thousands of women in labor—statistics in relation to the fatality caused by peritonitis, during their many years of attendance on puerperal women. While a student of medicine in 1827 I had my first case of labor. Then there was no dread of puerperal fever being caused by germs, introduced into the uterus or vagina by the hand of the accoucheur, but the few cases which did occur were attributed to the powerful, long-continued uterine contractions, or to injury by the forceps, with laceration and subsequent inflammation of the parts, and to extension to the peritoneum. What obstetrician has not known how sore and tender, on pressure, the womb ofttimes was, when pressed upon soon after childbirth—even before Credé began his unnecessary and heartless wrenching and punching of it—and yet rarely did puerperal fever occur. So with this view of things I started in this specialty and kept at it for sixty years, attending more than three thousand women, ever amazed by the fact presented to me of the rare instances of mortality attendant on gestation and childbirth; the latter process and after-treatment of the mother being often attended by conditions which would now be considered extremely perilous to life, in almost every instance, by those who are pressing on us the use of antiseptics, to secure safety to puerperal patients. In those days our education in midwifery was little more than the details needed to conduct an ordinary labor. Oh! how poorly I was fitted to aid the patient in her apparently perilous work; and after the labor was over, how worse than useless, even dangerous were some of the well-meant measures of the nurse. As soon as the child was born, a bowl of "tiff"—gin and water, or whisky and water sweetened—was given to the patient—nor was the doctor forgotten—and then for many days, as drink, hot teas, balm, pennyroyal and others, but not a drop of cold water. Such was the custom, but never mine. Forbidden as it was, I insisted on cold water as drink. I had attended a good many cases and had often, on my after visits, been met, on entering the room, by an odor recognized as that of putrid blood, and so offensive that it was unpleasant to remain there. I spoke of it to the nurses, but they said it was always so, and as I was a mere boy, when compared with the venerable matrons who, in those days, ministered to the lying-in women, who were so neat and clean in their own persons, I concluded that the "cloth" had perhaps remained there too long, and that its removal would do away with the fetor; so gave directions to have a fresh one applied, and went away. So things went on in most of the cases for a year or two. As a general thing the fetor was very evident for a week or more, and finally was so bad in one case, that I determined to see what condition the patient was in; when lo! I found that she had not had a single washing of the genitals and contiguous parts, or a removal of soiled clothes since the end of the labor, though a whole week had elapsed. On expressing my surprise and disgust that the nurse had left her in that condition, and without a regular cleansing every day, I was told that it was not the custom to do so, through fear that the washing and change of clothes would cause her to "take cold." I had succeeded an aged practitioner in that region, and so I suppose the practice had gone on during many years with the nurses for the majority of lying-in women. If these women thus treated, with no antiseptic measures before labor, none during it, nor afterward for the proverbial "nine days" which were to complete the lying-in period, passed safely through this ordeal, and repeated it again and again, not one in many hundreds suffering from puerperal fever, is it reasonable that other precautions are more needed than those of cleanliness obtainable without the use of antiseptics, which are now so much used, and which, from their poisonous nature, have in some cases caused the death of the patient?

From the first days of my practice up to the present time, in threatened abortions or miscarriages, when there was slight hæmorrhage going on, a like fetor has been noticed in nearly every case (when the clothes were raised in order to examine the patient), day after day until the ovum was cast off; the vagina being filled with clotted and putrid blood. The justly celebrated Professors, Dr. Chalkly James and Dr. Wm. P. Deucer, teachers of midwifery in the University of Pennsylvania sixty-two years ago, directed us in those

cases to tampon the vagina, so that the woman would be safe during the absence of the physician, but every day to remove it, and have a fresh one to take its place, or the same one washed and soaked in vinegar and then replaced. Thus I have sometimes had cases go on from day to day for nearly or quite a week, before the uterus was sufficiently opened—we did not force it open then—to remove the ovum; and seldom have I known anything more offensive than the sponges and putrid blood which were in the vagina, when I attempted their removal, and yet in not a single case in all my sixty years of practice did any of these patients suffer from puerperal fever, or peritonitis, or any other fatal affection of the pelvic organs. In such cases the woman was often examined to ascertain whether or not the abortion was likely to occur, or whether the ovum could be removed, and it was sometimes—often, indeed—necessary to remove the ovum, or the secundines through which the fœtus had slipped, leaving them in the womb, but the patient, though sometimes pale and weak, would soon rally and be herself again.

Why then, I ask, if by such practice—whether it was right or whether it was wrong—no harm came to the patient, so far as life was concerned, need we now, when we have good nurses and great cleanliness enforced, use antiseptic precautions and measures or be in danger of criminal prosecutions based on the testimony of obstetrical experts, who see infectious germs under every finger-nail, yet who have never attended half a dozen cases of labor and do not know that we object to the use of antiseptics because several women have lost their lives by the use of them as directed by the germites, though thousands of women in our State suffered abortions every year and got well without a set-back. Two days ago, a physician who has practiced for twenty years and has had a large practice, five cases last week, wrote to me: "As for germs, if they are as numerous and as rampant as writers and teachers would have us believe, then almost every puerperal woman in the country ought to die of peritonitis. The scrubbings and squirtings may be all well for hospitals, but in communities of decent people, they seem to me useless and worse than useless." Very recently a writer has given us his opinion, that the physician should take charge of every woman, whom he expects to attend during labor, at least three months before the time of expected labor, and direct her diet, and baths, and everything that aids in keeping the infectious germs at a distance. And about two years ago another physician gave a caution to those of us who might find it necessary to use a rectal injection, to be careful not to let the germs in by that back-door. Why these great fears? Are not women now as they were fifty or sixty years ago and have always been since that time? And did not they then pass through the labor process under less favorable conditions than now, and yet without peritonitis in more than one of a thousand cases? and even that *one* perhaps the result of violence and not caused by germs. And yet were not the germs as numerous then as now? Ah! here the germites possibly have me; for half a century ago farmers grew potatoes without difficulty; they put the cuttings in the ground and they grew amain. Nothing disturbed them; but now what a change! They are planted, send up their stalks and leaves and give promise of a crop; when lo! in a single night, the potato-bug. The beautiful black and gilded germs fasten on the growing plant, and if the Paris-green, the germicide, be not at hand, the plant dies from the destruction of its lungs. So, it is plain that one generation may have no secret, deadly enemy to bring death to happy homes, and yet the next have one. But is it so here? Certainly not. The man who practices alongside of the frightened antiseptic doctor sees not, fears not any venomous germs, and his patients rise from their beds happy in their love of offspring.

Counting but ten miscarriages to every hundred labors, I must have had more than three hundred in my practice, very many of them—indeed, nearly every one of them, being in the condition described above—the vagina, and sometimes the uterus, containing putrid blood for many days, and yet not in a single case did peritonitis occur. The same conditions have been presented to thousands of other physicians in cities as well as in the country.

As we are now directed by teachers to use the rigid antiseptic measures of the present day, even when attending the healthiest woman, and though no infectious disease prevails in the neighborhood—and threatened with prosecution if we do not—it is pertinent to inquire what has been the result in the last fifty years in the practice of physicians who took no precautions against carrying infectious diseases from patients whom they were attending to those women to whom they were called when in labor.

As I was not more successful in my obstetrical practice than other doctors, an account of my experience in this branch of our business will fairly represent the practice and results of the profession for the whole sixty years during which I was in active practice, 1828 to 1888. When attending patients ill with measles, scarlet fever, small-pox or erysipelas, I visited my other sick people, including puerperal ones, the same as though I were not attending an infectious disease. There were but few cases of small-pox came under my care—not more than 15 or 20 perhaps, in all my long practice, and only two proved fatal. One, who recovered, I not only visited as a physician, but through the refusal of the "Poor Directors" to receive him at the almshouse, and the fear of

the family in whose house he was, I felt compelled to visit him twice daily and attend to all his wants during all his illness. I visited families without taking any precautions against conveying the infection to puerperal or other patients.

Scarlet fever prevailed greatly at times during my first thirty years of practice. In a severe epidemic of it, one winter, I had more than eighty cases. Every day of that winter I was in attendance on them, and during that time had many obstetrical cases, and in my sixty years of practice I, of course, had many hundreds of cases, and yet I did not carry any scarlet fever germs to infect a single lying-in woman, though I sometimes went directly from attendance on these cases to the woman in labor. Even more than that; when my children, nine in number, had the disease at different times, two or more at a time, and I nursed them and slept in the room with them, I went, if called to a case of labor, straight to the patient without taking any precautions against conveying the disease to the woman. Some persons, even at that time, inclined to the belief that the infection of measles, scarlet fever, small-pox, and notably erysipelas, might be carried from the infected houses in the clothes—not under the finger nails—and therefore changed their clothes if attending small-pox patients. At that time the dirt under the nails was not known to be the nidus of germs, and washing and scrubbing the hands for the special purpose of dislodging them was an unheard of process.

I believe as fully in the infectious nature of measles and scarlet fever as I do in the contagiousness of small-pox, and yet in my visits to families where the children had never had these diseases, I never carried it to them from other infected patients. If there be danger or a possibility of the infection being thus conveyed by a physician, I think my exemption from being a carrier of it must have been due to the short time spent in the sick room, or to the sometimes long ride in the open air to the next place visited. Even more dreaded than the three diseases is erysipelas as a cause of puerperal fever. As with the others, I took no precautions. If attending a case of erysipelas, if a call were made on me to go to an obstetric case I went at once without using other precautions than with the other three diseases.

Here allow me to report a single case: January 17, 1860, I was called to Mrs. Rey, a young wife within a few days of her expected labor. I found her with enormously swelled œdematous labia, which kept her limbs widely separated. There was an erysipelatous redness covering them. Measures were used to relieve her, though with little change in the size of the swelling, while the erysipelatous redness increased in intensity and extended to the contiguous parts of the thighs. On the 20th I was called in haste, as she believed labor was approaching, but as the pains were trifling I left her, after waiting a couple of hours, and from that time was frequently with her until the 23rd, when the child was born alive. The labia were then greatly discolored and before her death, on the 29th, sloughed badly. Peritonitis was evident soon after her labor terminated, and was the cause of her death.

Now, between January 17, the day of my first visit, and the 20th, when I was with her two hours, I attended two other women—Mrs. Henderson on the 17th and Mrs. W. on the 19th. And on leaving Mrs. Rey on the 20th, at eleven o'clock P.M., was in attendance on Mrs. Righter at one A.M. on the 21st, and assisted in her parturition. From this statement it appears, not only that I was visiting and in attendance on the first three during their labors, while in daily attendance on the erysipelatous case, and that in two hours after I had examined Mrs. Rey, or had attempted to do it, but failed because the tabia were so swelled that I could not succeed in reaching the os uteri with my finger, I was in attendance on Mrs. Righter, and continued with her for some hours, occasionally examining to mark the progress of the case. And after this, when Mrs. Rey's labor terminated, I continued to visit Mrs. Righter and the others as often as was my usual custom, and they all did well. I know full well that all this is not conclusive proof that the poison of infectious diseases cannot be carried from one person to another in the usual way of visiting patients, and in labor of handling them, but it is strongly against such a probability. I have merely stated facts, carefully recorded during many years of practice, for the consideration of readers. When, in 1863, I published two thousand three hundred and thirty-seven cases (afterwards swelled to three thousand and thirty-six) I discovered that few, if any, physicians in our populous country had careful records of their cases, but that they had to depend on their memory if they wished to speak of them in after years. What I have written here is from a careful record made thirty years ago, when I had no expectation that I should ever again have need to refer to these facts. And now when I add that in all this long practice of sixty years, and in profound ignorance of poisonous germs being carried in my clothes, or in the dirt—when there was any—under my finger nails, that though in attendance on 3,036 women in labor, I never once carried an infectious disease to them, I feel that I might rest my case here. But I prefer to add the experience of some experienced physicians in relation to the occurrence of puerperal peritonitis in lying-in women. Professor Traill Green, M.D., of Easton, Pa., known to the profession everywhere in our country, has practiced fifty years, and on enquiring of him in relation to the now

dreaded puerperal fever he replied: "I have been so happy as to have no case of puerperal fever, and I think it has been very rare in the practice of fellow practitioners." Would it be possible, think you, to convince this experienced man who has watched by the bedside of suffering women during half a century, that it is now necessary for him to begin, three months before a patient's expected labor, to visit and prescribe for her, regulate her diet, direct the times for taking exercise, advise her when to bathe, etc., healthy so she be, and when the labor has begun, to scrub his always clean hands, dip them in a solution of corrosive sublimate, bathe the genitals of his patient with it, throw some of it into the vagina, and even into the uterus, keep it by his side, so that he may dip his hands in it every time before "touching" his patient; and then when the child has come and the placenta been removed, to throw a solution of corrosive sublimate, by means of a powerful syringe, into the cavity of the womb "to wash out the blood clot?" I repeat, do you think he would believe such proceedings necessary?—even if we had never heard of the many deaths which have occurred from antiseptics having been used to wash out the uterus after delivery?

But let me pass to other testimony. Another friend of mine, a graduate of the University of Pennsylvania, 35 years ago, a man of undoubted truth, writes: "What nonsense is all this stuff about perineal pads and douching the vagina before and after labor, and antiseptics in obstetric practice? However useful and necessary a certain amount of it may possibly be in lying-in establishments, it seems useless here. I have never had a fatal case of puerperal disease, and have seen but three or four in consultations."

Dr. Wilson, of this county, and a member of the County Society, writes: I have been in continuous practice for twenty years and have always had a large obstetric practice, my cases numbering between one thousand and fifteen hundred, and *have never lost a woman* (italics mine). I have never, as a rule paid much attention to antiseptics. In fact I have always looked upon labor as a physiological process, and the less it was interfered with the better the results.

Dr. J. B. Carroll, of our society, writes: "In fourteen years' practice there has only been one case of puerperal fever."

Dr. J. B. Walter, of Bucks County, says: "In 22 years' experience I have had considerable obstetrical business—five cases last week—and only two cases of peritonitis. One of them arose from a lacerated cervix; was very ill, but recovered. The other was a metro-peritonitis, resulting primarily from over-smartness, and secondly from unjustifiable battering and bruising of the uterine tissues, by a rather eminent man, who needessly, after two hours successfully turned, and with my aid delivered a dead body, to be followed in a few days to the land of shades by the mother. In this case all needful antiseptic precautions were taken."

Dr. D. Colvin, of Clyde, N. Y., replies as follows: "Though compelled to relinquish active practice for a time, yet I can report attendance on 1,279 cases, exclusive of consultations. I have never lost but one woman, and she died a few minutes after the placenta was removed. In not one single case have I ever used antiseptic treatment, and have never had a case of puerperal peritonitis, but have seen two or three in the practice of others.

"When I think of the hundreds of women whom I have delivered in log-houses and board shanties, long before the antiseptic treatment was thought of, and have seen those women up in a few days, and caring for their children, with their health unimpaired, not one of them dying, it teaches me that the caution given to us by our old professor of midwifery: 'Beware of Meddlesome Midwifery,' was timely and proper.

"My father, too, was in practice from 1817 to 1876, and I know of only one case of puerperal peritonitis in his practice."

Thus could I go on with just as strong testimony from a thousand country physicians, but it is not necessary, for I would be told of the wonderful achievements of our present surgeons, due mainly, as the germites believe, to the use of antiseptics in their operations. Their success has been marvelous; but was it due to antiseptics? Are there not many successful surgeons and gynecologists who do use them? What stronger testimony can be given for the success of surgeons who use antiseptics, than have been given by our own Goodell, Sutton, and Joseph Price, and Lawson Tait of England, of their unrivaled success in surgical and gynecological operations, by cleanliness, without the use of antiseptics in the surgical treatment of puerperal and non-peurperal women?

As their testimony is not at hand I quote from Dr. George Dean, of Spartansburgh, S. C., who spent some days on a visit to the Gyneccan Hospital, in Philadelphia, under the supervision of Dr. Joseph Price and Dr. Charles Penrose. "This hospital is a model in its way. It is new and small and lacks many conveniences of some other hospitals, but the lack of them is more than counterbalanced by the skill and enthusiasm of its chiefs, and their determination to achieve a success for it second to none in the world. It already stands at the head of such institutions in the United States. I witnessed many operations there—abdominal sections and plastic operations upon womb and perineum; success in every case followed. I have seen pustules as large as small intestines, adhesions so great that the bowel would tear before the adhesions would break,

and all anatomical relations obliterated in the pelvis, and yet these patients made an uninterrupted recovery." To this I may add that in the Gyneccan Hospital in a series of 80 consecutive cases there was not a single death—and that in one hundred sections, done in alleys and courts in the service of the Phil. Dispensary, but a single death occurred, and that was done by an assistant. In not a single case were chemicals used. There is a disposition in some—many—eminent physicians to discredit the statistics of those general practitioners in the country who report a light mortality in their hundreds of cases. They will, I feel assured, question the testimony of Dr. Traill Green and the others cited by me, and I desire to add a few more to the above, just as reliable. Dr. Kemper of Muncie, Ind., in *Medical and Surgical Reporter*, June 22, 1889, reports 900 cases of which only two women died, one of puerperal convulsions, the other of pneumonia. He also reports that Dr. J. T. Chenowith had 1,600 labors with only one death; Dr. N. T. Chenowith 708, 2 deaths; Dr. A. H. Farquar 500, 2 deaths; Thomas Botkin 525, 5 deaths; Dr. J. S. Blair, 419, 2 deaths; total, 3,752 with 12 deaths; less than one death in 300 attended—and no antiseptic precautions taken. He pertinently remarks, "I have the honor of a personal acquaintance with the physicians mentioned, and I trust them as implicitly as I do physicians in lying-in hospitals. I am not aware that a country practitioner is more prone to exaggeration than his city brothers, or that falsity was indigenous to rural localities."

Dr. William F. Mitchell in "*Reporter*" of Oct. 5, 1889, gives the following testimony. That he has been in practice 24 years, has had more than 700 cases; has never administered, or caused to be administered to any woman any antiseptic remedies before or after parturition, and has never lost but one woman, and she was confined prematurely and under all the circumstances could not have expected to live. I prefer generally to present the testimony of others rather than my own, but I may say here that my 3,036 cases are confirmatory of what has already been given by the practitioners alluded to. A detailed account of them may be found in *New York Medical Journal* for May 15, 22 and 29, 1886.

Tedious as I have already been, I must go further, as this is an important subject, and get some testimony from "abroad." In the American Medical Association JOURNAL of December 28, 1889, we have Dr. Bantock's views of Listerism. Allow me to briefly state some of his facts. He says, that in 1881 only Mr. Lawson Tait and himself dared perform operations without using the rigid listerian details; but in 1889, in England, it was a rare thing to see the spray used at all; and in the Samaritan Free Hospital it has been discarded by all his colleagues with one exception, and that this is due to the superior results obtained there, since he resorted to a more rational and simple method. Speaking of ovariotomy he records it as a fact, that from April 1883, to October 1888, 3½ years, he did not lose a case in the Samaritan Free Hospital in a series of 90 cases, while during this period the deaths under the listerian system exceeded 12 per cent., and his patients recovered with less pyrexia than did those under the carbolic acid treatment. For his hands, sponges and instruments, he uses no antiseptic—only plain water—regards water that is fit for household use, suitable for the purpose of any operation, and has no hesitancy, if too warm for his hands, to cool it with cold water fresh from the tap—as, for instance, when washing out the abdominal cavity. As a covering to the wound he uses simple absorbent gauze, innocent of any germicide, and such is his belief in its harmlessness, that were it not for other considerations he would leave all his wounds exposed to the air, as he has sometimes done in amputations of the breast. He attributes the bad results which so often occur from washing the peritoneum to the employment of antiseptic material in the water, which becomes absorbed, or in some way poisons the patient. We know full well, that some persons are peculiarly sensitive to the toxic action of corrosive sublimate and that, though in a majority of cases no harm may result, yet occasionally a case is met with in which this idiosyncrasy exists. This is the only rational way of accounting for the large number of deaths due to the use of carbolic acid, and more especially to corrosive sublimate.

He therefore protests against the use of so-called germicides in flushing the peritoneum; and cannot insist too strongly on confining the surgeon to plain water as at once perfectly innocuous and thoroughly efficient.

It appears from what I have written, that there is real danger to the woman from the use of antiseptics—more danger than there is in the practice of the physicians who do not use them. As confirmatory of this, let me refer to what has happened in the Nurses' Home and Lying-in Charity Hospital at the corner of Eleventh and Cherry streets, Philadelphia; a new building erected for the special purpose, I have been told, of illustrating the value of listerian treatment. Quite recently it had to be closed, because of a virulent epidemic which occurred within its walls. Surgery was done there as well as obstetrics, and reliance was placed upon chemical solutions, and everything done was under the supervision of careful and able surgeons and gynecologists. How does this compare with the Gyneccan hospital? Not at all. The success of the latter is in direct contrast with the failure of the former.

Need more be said? No. The testimony of Dr. Traill Green, known as he is everywhere as a

man of truth and honor, who has practiced midwifery for half a century, should convince every right-minded man, that there is no need that country physicians should take the precautions against germs, so strongly urged by the advocates of listerism. But Dr. Green is sustained by other good men whom I have named and thousands of others whom I could name. No, I need say no more, for if one were to rise from the dead and give like testimony, the antiseptic enthusiasts and laboratory practitioners would still discredit the testimony of the bed-side practitioner.

SOME CLINICAL EXPERIENCES WITH EUCALYPTOL.

Read by Title in the Section of Medicine and Physiology at the Forty-Second Annual Meeting of the American Medical Association, held at Washington, D. C., May 5, 1891.

BY I. N. BRAINERD, M.D.,
OF ALMA, MICH.

During the last ten years I have often prescribed eucalyptol in bronchial and pulmonary troubles. From this experience I have learned to put a high therapeutic value upon it in some respiratory affections, viz.: chronic bronchitis, persistent cough, chronic interstitial pneumonia, and to a less degree in tuberculosis.

The following list of cases taken from my later experience, furnishes a reasonable amount of proof of its utility:

Case 1.—Miss Bellard, aged 19. This lady called upon me in August, 1888. She complained of malaise, and some pain in the left lung. She had only a moderate cough and a limited expectoration. The temperature was 99°. Auscultation revealed a harsh and catchy respiration in the upper lobe of the left lung. A trifling dulness on percussion could be discovered in this region. I gave the girl eucalyptol, and had her visit my office every fortnight for half a year. She so far improved as to lend expectation of her recovery. Then, school beginning, she started to school. As cold weather came on, she was chilled one day in school, and developed a severe croupous pneumonia. For this she was treated by a physician in her town, but not recovering, I was called to see her. Resolution did not take place as it should, and I advised the mother that the girl would never recover from this sickness. After a few weeks she died. I believe that except for this intercurrent pneumonia, this girl would have continued to progress to a recovery from the phthisis. For a whole year she improved until she felt nearly as well and strong as ever. Then she sickened with pneumonia and died in two months.

Case 2.—Mrs. Thompson, aged 30. This lady called upon me in September, 1889. She was emaciated to a skeleton, had hectic fever, pulse about 90, cough with some expectoration, and tenderness on percussion over both lungs. The respiration was catchy and frequent. She had almost a loathing for food and scarcely strength enough to come to my office. She had been ill for many months. I put her upon eucalyptol and cod-liver oil. She rapidly improved in all respects, and ceased to visit me after about two months. I had her under observation until all the objective symptoms, including the catchy respiration, ceased. I see her occasionally. She says my prescription has made a new creature of her. She is in her usual flesh and is doing her own work.

Case 3.—Mrs. Morton, aged 26, called upon me in September, 1889. She had a miscarriage in the spring. Upon rising from this sickness she took cold and developed a cough and soreness through the lung, from which she did not recover all summer. Neither did her menses reappear. She is from a consumptive family. These things alarmed her somewhat, and she applied to me for aid. Her respirations were harsh and catchy, and her cough was quite troublesome. I gave her a prescription containing eucalyptol, and have had her under observation ever since. Her respiratory murmur is all right and she has menstruated once or twice since, and now seems to have gone into her menopause at this early age. She is in perfect health.

Case 4.—Mr. Bradford, aged 30, called upon me in December, 1889. He complained of a pain in his chest and an inability to take deep inspirations with ease. Work involving the use of the pectoral muscles, as chopping, sawing, husking corn, etc., was painful. He was growing poor and emaciating. Physical examination of the chest revealed a little dulness on percussion over the upper parts of both lungs, and a harsh catchy respiration. I put this man upon eucalyptol, and watched the case for a year and more. The patient still complains at times of lameness in the thoracic parietes, but he now has less of the catchy respiration and none of the dulness on percussion.

Case 5.—Miss McLaren, aged 16. In February, 1890, I was called to see this girl. I found her in bed. She had a temperature of 102°, a pulse of 120, respiration 30, cough and expectoration. She had la grippe a few months before and had fallen into this state. Her respirations were harsh, tubular and catchy. I treated her symptomatically and put her upon cod-liver oil at once. After about a month she began to walk out, and then I gave her eucalyptol besides her cod-liver oil. She continued to improve for some months, when I permitted her to go from my care to Ohio, where she has since remained. When I first saw her, she was much emaciated, but now she weighs 150 pounds. The cough and expectoration have ceased, and she is now perfectly well. Several children in this family have already died of consumption, and I believe this girl had incipient phthisis. The only thing lacking in the evidence is the demonstrated presence of the tubercle bacilli. I made no search for them.

Case 6.—Mrs. Pulfrey, aged 34, visited me in February, 1890. She had been failing for some months. She complained of pain in her right lung. The percussion note was normal, but the respiratory murmur was catchy. I put her upon eucalyptol and Phillip's wheat phosphates. She soon began to revive in every way. The catchy respirations have ceased and the patient has nothing to remind her of her former condition except her feeble endurance.

Case 7.—Mr. Young, aged 27. In the latter part of 1889 this man was taken sick in Boston. He was treated for bronchitis, but finally had to go into a hospital. Here he heard the visiting physician, a college professor, say to a class of medical students: "We don't get hold of this case." After a few weeks' stay in the hospital he came to Michigan to accept the hospitalities of his brother. In February, 1890, I was called in to see him. I found him greatly emaciated, with a temperature of 101°, pulse about 90, respiration 28, and a violent cough, raising about a pint a day of frothy, bloody sputa, containing mucous, pus and blood. The sputa had a rank, gangrenous odor, and separated into two layers, one of fluid and one of foam. This was enough to make a diagnosis of gangrene of the lung. Physical exploration revealed a small area of flatness at the lower point of the right lung. The rest of the lung was a little super-resonant because of its doing compensatory work. On several occasions this patient had alarming hæmorrhages. I put him upon eucalyptol and cod-liver oil. He gradually improved under this treatment, and went to Canada to live upon his

father's hospitality. Improvement continued, and now, after one year, he says he is as well as ever.

Case 8.—Mr. Brown, aged about 60, consulted me in April, 1890. He is asthmatic, had the grippe a few months before and was left with a very aggravating cough. He had consulted three or four other physicians without benefit before he came to me. I prescribed an emulsion of eucalyptol and hyosciamus, and was gratified to hear from his own lips the next morning that he had spent the best night for several months. The cough ceased at once.

Case 9.—Mr. Adams, aged about 40. This patient first came into my hands in July, 1890. He was emaciated, had a consumptive look, complained of pain in both lungs, and coughed some in the morning. He had just buried a brother from consumption. His respirations were jerky and the area of hepatic flatness was enlarged. His greatest complaining was about a circumscribed point of tenderness in the greater curve of the stomach. This I believed to be a tubercular ulcer. I put this man upon eucalyptol and bismuth mixtures, in separate bottles, and kept him under observation for a few months; but as he would not believe there was anything wrong with his lungs, and as his stomach was not bettered, he desisted from the treatment. It is to be said, however, that the respirations nearly ceased to be jerky during the latter part of the time that he remained under treatment.

Case 10.—Mr. Hayt, aged 27, applied to me in January, 1891. He had had influenza and had been left in a condition of prostration, and with pain in both lungs. I found the respirations catchy and both lungs dull, especially in their lower portions. Strange to say the temperature was normal, the pulse 64, and the respiration 16. Four years before an eminent physician told him that something was wrong with his lungs. He had been obliged to quit work, and since had done but little work. He is about five feet and eleven inches tall and weighs only 135 pounds. He has a consumptive look. I put this man upon eucalyptol and cod-liver oil. Almost full resonance has been restored to the lungs and the respirations are but slightly interrupted. There never was any expectoration. My diagnosis in this case was chronic interstitial pneumonia.

Case 11.—Miss Taylor, aged 29. I was called to see this patient in January, 1891. She had had pneumonia in Grand Rapids, Michigan, and had come to her sister's a week earlier than her physician had told her she might. She took cold upon the train. This prevented resolution. I found her with a temperature of 101° and respirations 24. The lower lobe of the left lung was flat upon percussion, and the breathing was tubular. This was some two months after the onset of her pneumonia. The expectoration was muco-purulent and abundant. I prescribed eucalyptol and cod-liver oil for her. She has steadily improved and her prospects for an ultimate recovery are fairly good.

Case 12.—Miss Reid, aged 21. On the second day of March, 1891, I was called off from the road to see this girl. About Christmas time she was taken with the influenza. She partially recovered from this, and made two attempts to go back to school. Twice she failed, and twice went home. She was treated by another physician, and discharged as cured. Three or four days later I was called, as stated at the beginning of this paragraph, and found the following conditions: Temperature 103, pulse 130, respiration 24, free and muco-purulent expectoration, night-sweeats, anorexia, and great prostration. Her respiration was catchy in both lungs, and accompanied by large and small moist râles on both sides. The percussion note was somewhat dulled on both sides, especially in the lower lobes. I believed that the girl had slid from the influenza into catarrhal pneumonia, and was likely to fall into acute miliary tuberculosis, and so informed the mother. I administered antipyretics and tonics, and later put her upon eucalyptol and cod-liver oil. A later examination of the sputum revealed swarms of the bacillus tuberculosis. The case has been in my care now two months. The temperature averaged the first month about 102°, the second month 101°. The expectoration has grown much less. The respirations fell in two weeks to normal and have so remained ever since. The pulse has fallen from 130 to 96, where it stays. This may be normal for her, for the two grown sisters have the same rate of heart-beat, and they are perfectly well. Her appetite is returning and the bacilli have nearly disappeared from her sputa. The patient is still bedfast and in a precarious condition. Whatever the outcome may be, the fact is patent that the eucalyptol has done her much good. It looks as if it had averted the acute miliary tuberculosis, but also as if the patient were settling into a rapid phthisis, though no signs of cavities can be found, and no râles are now heard. The respiration has ceased to be catchy, and has become smooth in all the lung except in the upper lobe of the left lung, where it is harsh and tubular at this writing. It has been better here until a few days ago, when a sudden increase in the expectoration indicated the rupture of a tubercle. She has not menstruated for four months.

Case 13.—Mr. Allison, aged 20, came into my hands the first of April, 1891. This case is far gone with consumption. He had a temperature of 102°, pulse 110, and respirations 32. His expectoration was profuse and swarming with bacilli. He had night-sweats, tubular and jerky respiration in the left lung, pectoral pains, and was greatly emaciated. I had no expectation of producing any abiding change in the patient, but at once put him upon eucalyptol and cod-liver oil. In a fortnight his night sweats were stopped and the expectoration reduced one-half. The patient has been benefited by the treatment, but will die. He has had one hæmorrhage since he has been in my care.

I am not putting eucalyptol forward as a specific for consumption, for it is not; but this experience has led me, as said in my opening paragraph, to put a high therapeutic value upon eucalyptol in persistent, irritable cough, chronic bronchitis, chronic interstitial pneumonia, and to a less degree in tuberculosis. Cases 1, 12 and 13 were certainly tubercular. There can be but little doubt that case 5 was tubercular. Five is well; there is some prospect that 12 will get well; 13 will die, and 1 is already dead. Case 7 was a case of gangrene of the lung, and is recovered. Cases 2, 3, 4, 6, 9 and 10 had symptoms of incipient phthisis. All are living, and in as good or better health than they were a year ago. Case 8 was a case of irritable cough. Case 10 is a case of chronic interstitial pneumonia. Eight is cured, and 10 is much improved.

Eucalyptol is very permeating. It is eliminated by the lung, the skin and the kidneys. It can be smelled upon the breath, upon the clothes when changed, and in the urine. It is antiseptic. It has a healing effect upon bronchial epithelium and a sedative effect upon the peripheral nerves in the respiratory tract. It is because of these physiological effects that the therapeutic results are produced.

I administer it in five to ten minim doses, in emulsion, every four hours.

THE THERAPEUTIC ACTION OF TONICA WATER. WITH THE HISTORY OF TWENTY-SIX CASES WHERE IT HAS BEEN USED.

Read in the Section of Practice of Medicine and Physiology, at the Forty-second Annual Meeting of the American Medical Association, held at Washington, D. C., May, 1891.

BY J. W. SMALL, M.D.,
OF NEW YORK.

Water, as an agent in the treatment of disease, is a remedy which should not be too lightly estimated, as it is more or less concerned in all those changes which take place in inorganic matter, and is essential to the life and growth of all living organisms, whether animal or vegetable. When taken into the stomach it acts by its temperature, its bulk, its absorption, and as a solvent for mineral and vegetable matters which otherwise could produce no beneficial action in the animal economy. When natural spring waters are so far impregnated with foreign substances as to have a decided taste and a peculiar therapeutic action, they are classed in the Pharmacopœia as mineral waters, and are divided into five classes: the carbonated, alkaline, sulphuretted, saline (including magnesian, chalybeate and chlorinated), and silicious. The name of each of these classes suggests its peculiar impregnation; but analysis of the water of nearly all mineral springs shows a combination of the ingredients of two or more of these classes, and some, like the one I describe, the whole of them.

The Tonica mineral water is an alkaline, carbonated, sulphuretted, silicious, chalybeate water which comes from the earth in its natural purity at Highland Park, Conn., ten miles from Hartford, on the N. Y. and N. E. R. R. Its analysis, made at the Massachusetts Institute of Technology, shows it to contain to the U. S. gallon:

Sulphate of potassium	0.355 gr.
Carbonate of potassium	0.180 "
Chloride of sodium	0.215 "
Carbonate of sodium	0.345 "
Carbonate of lime	0.512 "
Carbonate of magnesia	0.234 "
Bicarbonate of iron	0.970 "
Phosphoric acid	0.051 "
Silica	0.618 "
Alumina	0.093 "
Oxide of manganese	a trace.
Sulphuretted hydrogen	a trace.
Organic and volatile matter	0.510 gr.
Making a total of	4.083 grs.

This water also contains carbonic acid gas in solution.

It will be seen from this analysis that the ingredient which enters most largely into its composition is bicarbonate of iron, of which each gallon contains 0.970 gr.; the next is silica, 0.618 gr.; and the third carbonate of lime, 0.512 gr. It also contains 0.051 gr. of phosphoric acid, a trace of oxide of manganese, sulphate and carbonate of potassium, and chloride and carbonate of sodium.

Therapeutic Action.—This water is not an active cathartic, but rather a mild aperient. By the stomach and bowels it is easily retained, absorbed and assimilated. It does not constipate the bowels, as do many of the waters which contain iron, and does not produce or increase acidity, being alkaline in its reaction. If taken in large quantity it will produce free catharsis at first, but its cathartic action diminishes with its use. It is at all times an active but gentle diuretic, increasing the frequency of micturition and the amount of urine excreted by the kidneys. It increases the appetite, promotes digestion, and gives a feeling of warmth, tonicity and buoyancy to the whole system. It has a slightly sulphurous, earthy but not unpleasant taste, and is readily taken by the most fastidious. But its most valuable therapeutic action is upon the blood, upon which it exerts all the beneficial effects of an iron tonic, without any of those disagreeable results which attend and follow the continued administration of iron in other forms. In all conditions of the system characterized by a depraved condition of the blood, as constitutional syphilis, scrofula, chronic albuminuria, phthisis, anæmia and chlorosis, its revivifying action is soon apparent in the increasing bright, healthy color which it brings to the lips and cheeks, and its favorable action upon the appetite and digestion.

Mode of Administration.—In commencing the use of this water I have usually begun with a pint each day in divided doses taken before, during, or directly after meals, two or three times per day, and increased the amount gradually to one quart, and then diminished the quantity per day if the necessities of the case seemed to so require. In diabetic cases I usually commence with a quart or three pints and gradually diminish. If a quart is taken the first day it is usually followed by a free cathartic action of the bowels and free diuresis. But if a smaller quantity be taken at first and the amount gradually increased, only a gentle stimulation of the bowels and kidneys is perceived, and the same beneficial results are attained. In cases where wine is indicated, I give the wine with three or four times its quantity of the water, making a very pleasant and agreeable beverage. Upon my own table I always use it in this manner. It is also a very agreeable vehicle for bitter tinctures or infusions.

During the last year I have been enabled to make an extended use of this water in a large variety of chronic cases of disease, and also upon myself personally. In connection with three other physicians I have noted its use in about sixty cases. Only a few can be described in a paper like this, but I have selected twenty-six cases in which its use has been attended with the best results, and present their history herewith.

Case 1.—Chronic parenchymatous nephritis, cystitis and prostatitis. Mr. J. F. C., age 62 years. Contracted syphilis five years ago. Two years ago had syphilitic orchitis, resulting in sarcoma of right testicle, which was removed by a surgeon. When he came under my observation he was suffering from chronic parenchymatous nephritis, the amount of albumen in his urine being very large and containing fatty and hyaline casts. Also had chronic cystitis and catarrh of the bladder. Prostate gland very much enlarged and micturition impossible without the use of the catheter. Acute syphilitic orchitis of left testicle, which was enormously swollen. After the inflammatory symptoms had subsided I gave him Tonica water, directing him to drink an ordinary quart bottle full each day. At first it produced free catharsis and increased considerably the amount of urine excreted by the kidneys. At the end of one month marked improvement was visible, with albumen reduced one-half. At the end of two months albumen about one-fourth, and after three months one-eighth the original amount. Appetite and digestion improved from the first, so that instead of being confined to the house, he is now performing all the duties of an active business life. This patient had been unable to take any of the ordinary forms of iron on account of their constipating and irritating effects upon the bowels.

Case 2.—Obesity, gout and rheumatism. Mr. E. F., a clerk and a man of sedentary and indolent habits, age 50. Height 5 ft. 5 in., weight at commencement of treatment 220 lbs. Chest contained a large amount of fat, which materially weakened the action of the heart. Considerable dyspnœa upon slight exertion, as upon going up a long flight of stairs. Specific gravity of urine 1010, and contained considerable albumen. After some preliminary treatment, I gave Tonica water in doses of one pint each day, with meals, gradually increasing the amount to one quart each day and keeping it at the latter amount for one month, then gradually decreasing. At the end of one month all symptoms of gout and rheumatism were gone and albumen had disappeared from his urine. Weight reduced 10 lbs. Appetite and digestion were much improved and abnormal heart symptoms had disappeared. At the end of three months had lost 10 lbs. more in weight. It is now five months since I first ordered Tonica for this patient, and he has lost about 25 lbs. of flesh, while his general condition has improved very much. The only change I made in his diet was to order him to abstain from saccharine and amylaceous foods, tea and coffee, partake of but one course at a meal, and have plenty of exercise in the open air.

Case 3.—Obesity and membranous dysmenorrhœa. Mrs. E. B., housewife, age 45, height 5 ft. 4 in., weight 226 lbs. Heart sounds weak and somewhat irregular, and great dyspnœa upon active exertion. Symptoms of fatty degeneration of muscular tissue of heart. Had suffered for two years from membranous dysmenorrhœa, the pain each month being intense and continuing from two to three days, and passage of membrane followed by very excessive menstrual flow. Gave a pint of Tonica each day, with injections into the uterus of sol. ac. carb. and tr. iodine once a week during the intermenstrual period, commencing first injection two days after cessation of menses. Regulated diet and exercise as in the preceding case. The result, after three months' treatment, has been a loss of 20 lbs. in weight, with complete cure of dysmenorrhœa. Condition of blood and general system very much improved.

Case 4.—Anæmia, chronic bronchitis and asthma. Mrs. J. W., age 42, housekeeper, has suffered several years from chronic catarrh of nose and throat, chronic bronchitis, anæmia and asthma. Applied local treatment to nose and throat and gave one pint Tonica each day for three months. At the end of that time the condition of this patient was very much better; catarrh and bronchitis wholly gone and no more attacks of asthma. Improvement in quality of blood very noticeable. I had previously given her iron in the form of a tincture and also a syrup of the albuminate, and combined with quinine and strychnine, but the effects were not lasting, as these seem to be.

Case 5.—Diabetes mellitus. Mr. E. R., age 40, engineer, had suffered for two years with gradual loss of weight, intense thirst and increased appetite. Former weight 180 lbs.; weight at beginning of treatment with Tonica 145 lbs. Amount of sugar in urine 13 grs. to oz. Specific gravity of urine 1042. I had previously limited this patient to a strict anti-diabetic diet and tried all the usual diabetic remedies, with the effect of reducing the specific gravity of the urine to 1037 and the amount of sugar somewhat, but not materially arresting the disease. In December, 1890, I commenced giving him Tonica water, giving him three pints each day and no other liquid, but continuing the anti-diabetic diet. At the end of January, 1891, I found the amount of sugar in the urine reduced to 5 grs. per oz. and specific gravity 1031, with marked diminution of thirst and appetite. March 3, I found the amount of sugar reduced to 3 grs. per oz., specific gravity 1029, with a gain in flesh of 10 lbs. At the present time (April 20, 1891), there is only a trace of sugar in the urine, its specific gravity is reduced to 1021; weight of patient is increased to 165 lbs.

Case 6.—Hypertrophy and valvular lesions of heart. Mr. R. W., 55 years old, shoe manufacturer, has taken a pint of Tonica each day for two months, with general improvement of blood and circulation, and disappearance of cardiac murmurs.

Case 7.—Anæmia and neurasthenia following "la grippe." Mr. J. R., artist, age 42, had a very severe attack of epidemic influenza, which was followed by general nervous weakness and anæmia. Gave one pint Tonica each day for two months. At the end of that time I find patient's general condition greatly improved, appetite and digestion good, and no remains of the malady apparent.

Case 8.—Anæmia and intercostal neuralgia. Mrs. E. F. J., age 43. Three years ago had two severe hæmorrhages from left lung. Has suffered since from anæmia with periodical attacks of intercostal neuralgia, these attacks occurring at intervals of a month or six weeks. Gave Tonica water, a pint each day for three months, with the effect of materially increasing the red corpuscles of the blood and improving the appetite and digestion. It has been now five months since I first gave this treatment, and for the last three months she has had no neuralgia.

Case 9.—Amenorrhœa, chlorosis. Emma B., age 16, had never menstruated, but had attacks of periodical headaches, recurring each month; is anæmic and poorly developed, skin yellow, complains of weakness and difficulty of breathing upon slight exertion, and shows symptoms of hypertrophy of heart. Gave one pint Tonica each day for three months, and ordered her to take plenty of exercise in the open air, with good nourishing diet, which soon established the menstrual flow, built up the blood and regulated the action of the heart and circulation.

Case 10.—Chronic dyspepsia, chronic constipation, acute rheumatism. Mrs. S. L., age 56, housewife, has had acid dyspepsia with troublesome flatulency for years, with occasional attacks of acute rheumatism. Is pale, anæmic, poorly nourished, and bowels constipated. Gave Tonica each day for three months, with disappearance of dyspeptic and rheumatic symptoms and general improvement of blood and digestion. Action of bowels, after once established, remains good.

In a paper written by R. M. Griswold, M.D., of Portland, Conn., a physician who lives in the vicinity of the springs and has had large opportunities for testing the medicinal qualities of the water, and entitled, "The Medicinal Use of Highland Tonica Water in various diseases, but especially in Dyspepsia and Diabetes Mellitus," I find a very interesting history of its use in thirteen cases, of which five were cases of chronic dyspepsia complicated with malaria and anæmia, one of acute malarial fever with acute gastritis, one of chronic cystitis, one of chronic eczema in a child 5 years old, and five cases of diabetes mellitus. Dr. Griswold claims such good results from the use of this water in these cases, and the history of the five cases of diabetes mellitus is so very interesting, that with his permission I have copied them from his valuable paper. Dr. Griswold says:

I will now notice five cases of diabetes mellitus treated with Tonica water after all other means of treatment had failed. In three of these cases the disease had not been even arrested by treatment. In the other two it had at times apparently been arrested, but there was no permanent improvement. Three of them, before coming under my observation, had been limited to the most approved anti-diabetic diet; the others had not been so strictly dieted. In all five cases the diagnosis was not to be doubted, as sugar in large amount was found in the urine repeatedly, both by physicians who had previously treated them, by myself, and by two experts in urinary analysis. The treatment in all these cases was similar, and consisted first, of a strictly anti-diabetic diet as follows: plain soups, oysters, clams, beef, poultry, bacon and ham, all kinds of vegetables except potatoes, turnips, carrots, parsnips, peas, beans and tomatoes. Cheese, butter, unsweetened custards, buttermilk, dry and sour wines, as claret and sherry, acid fruits, as lemons, currants, etc. Tea, cream, coffee without sugar, gluten bread from flour made by Farwell & Rhines, of Watertown, N. Y. In each case everything of a saccharine or farinaceous nature was carefully excluded, also all malt or spirituous liquors except the wines mentioned, and no water other than Tonica allowed. But it should be remembered that in three of these cases the diet had before been as carefully regulated, but with no apparent benefit.

Case 1.—Quarryman, 35 years old, Swede. Weighed when in health 190 lbs., present weight 130 lbs. Has been able to do no work for five months. Passes from 4 to 6 quarts of urine per day. Excessive thirst, markedly increased appetite. Pains in back, arms and legs, constant headache. Sugar 14 grs. to the oz., spec. gr. 1042. This case came under my observation in July, 1888. He was put upon red sulph. arsenic gr. 1–50 after meals, and limited to three pints of Tonica water per day for drink. At the end of one month a second examination of the urine showed sugar 5 grs. to the oz., sp. gr. 1032. In three months the amount of sugar was the same and the sp. gr. had not decreased, but there was a marked diminution of thirst and desire for food, a slight gain in flesh, and improvement in the general condition. In five months the sugar had decreased to 2 grs. to the oz. and the sp. gr. to 1028, and there was a gain of 8 lbs. in flesh. From this time on the improvement was steady, and the gain in weight correspondingly so, and in April of the next year he resumed his work, when no sugar could be detected in his urine, although the sp. gr. still was above normal—1025. He had gained 25 lbs. in flesh and was apparently well. He remained under my observation until the autumn of 1890, when he returned to Sweden, at that time weighing 170 lbs.

Case 2, in nearly every respect similar to Case 1, came under observation in September, 1888. Previous weight when in health 160 lbs., present weight 128 lbs. Amount of sugar in urine not noted, sp. gr. 1042. Treatment the same as in previous case. At the end of six months, sugar 3 grs. to the oz., sp. gr. 1031, gain in flesh 8 lbs. August, 1889, sugar ½ gr., sp. gr. 1028, gain in weight 13 lbs. Since that time I have examined the urine at intervals of about three months. At each examination traces of sugar are found, and the sp. gr. remains a little above normal, 1022 to 1026, but he feels well and maintains his present weight of about 150 lbs.

Case 3.—Quarryman, Swede, age 52. Previous weight 180 lbs., present weight 140 lbs. Not able to work for seven months. Came under observation January, 1890. Treatment as in previous cases. At time of first observation was passing 80 ozs. of urine per day. Sugar 20 grs. per oz., sp. gr. 1041. At last observation, January, 1891, he had gained 24 lbs. in flesh, sugar 3 grs. to oz., sp. gr. 1028. He is working every day and feels well.

Case 4.—Banker, aged 54. Had diabetes for six years. First seen in February, 1890. Weight seven years ago 192 lbs., present weight 142 lbs. No note of amount of sugar, sp. gr. 1038. Treatment as in previous cases. One

year from date, weight 165 lbs., sugar none, sp. gr. 1021.

Case 5.—Merchant, age 47. Disease first diagnosed two years before. Came under observation March, 1890. Weight 124 lbs., previous weight 174 lbs. Sugar 14 grs. to oz., sp. gr. 1037. June, 1890, sugar 11 grs. to oz., sp. gr. 1031. September, 1890, sugar 4 grs. to oz., sp. gr. 1025. gain in weight 24 lbs.

Cases 3, 4 and 5 are still under observation. They are now, and have been for more than a year, using from one to three pints of Tonica water per day. In each case the arsenic was discontinued in from three to six months from the commencement of its use. The anti-diabetic diet is continued, but in each case I attribute the much more than usually favorable results to the Tonica water, as in each, but more especially in three of the cases, the same treatment had been faithfully followed for periods of from six months to six years, but without the Tonica, and in none of them had there been any improvement, and in all but two the disease was progressing rapidly to an apparently fatal termination.

My friend, Dr. James Tibbetts, of Hyde Park, Mass., has sent me the history of two cases of gout and rheumatism and one of chronic cystitis, in which he has used Tonica water very successfully, but for the sake of brevity I will omit the details.

At this date it does not require any argument to convince the medical profession of the utility and value of iron as a nutrient tonic for the blood. Of its peculiar action in anæmia Stillé says: "The red blood discs appear to be the organ to which iron is especially directed, and by which the activity of animal life as well as of organic life is sustained at the highest point. These bodies it is which by contact with the inspired air in the lungs attract and become impregnated with oxygen, the essential agent in all the compositions and decompositions which sustain life in the tissues, acquiring thereby the scarlet hue of arterial blood, which they lose with their oxygen in their passage through the tissues to the venous system. Thus it would appear that the activity of nutrition, and probably also of calorification, is dependent upon the iron in the blood; and that when the red blood discs which contain it are most abundant, all of the functions of the economy attain their highest degree of activity and vigor." And in his theory of the operation of iron he says: "Iron, on entering the blood-vessels, combines immediately with the discs which have not yet acquired or have lost more or less of their ferruginous element. It enters the blood as a chloride, is decomposed, combines with the discs as a carbonate of the protoxide of iron, and in the lungs gives up carbonic acid and absorbs oxygen, and is thereby converted into a peroxide. The white corpuscles are destitute of iron, but when once saturated with it neither they nor the red corpuscles can receive any more."

But in order to obtain in the system the effects of iron as a specific nutrient tonic it is necessary, in persons of a bilious temperament or those suffering from stomach or intestinal indigestion, or torpidity of the kidneys, to gently stimulate these organs, thereby increasing their activity and their powers of absorption, assimilation and excretion, as, without a healthy action of these organs, most preparations of iron prove inert and act as a clog upon the system; and also to present the iron to the system in an exceedingly soluble condition, so that it may be easily absorbed and assimilated by the stomach and bowels.

Judging from my own experience with this water, it meets both these requirements more perfectly than any other ferruginous preparation which I have ever found, and for that reason is a most valuable adjuvant to other remedies in the treatment of:

1. Anæmia, amenorrhœa and chlorosis.
2. All menstrual derangements attended with periodical hæmorrhages.
3. In organic disease of the heart.
4. In nervous affections complicated with anæmia, as neuralgia, chorea, etc.
5. In depraved conditions of the blood, as constitutional syphilis, chronic albuminuria, and scrofula with anæmia.
6. In phthisis, chronic bronchitis and chronic catarrh.
7. As an alterative and nutrient tonic after eruptive fevers, as measles, scarlet fever, and in the anæmia following epidemic influenza.
8. In chronic malarial poisoning.
9. In errors of malassimilation and malnutrition, as diabetes mellitus, obesity, etc.
10. In chronic constipation complicated with acid dyspepsia and anæmia.

A REPORT OF THE EXPERIMENTS WITH TUBERCULIN AT THE GOOD SAMARITAN HOSPITAL IN CINCINNATI.

BY S. P. KRAMER, M.D.,
OF CINCINNATI, O.

The following is a report of the experiments with tuberculin in the treatment of tuberculosis, carried on in conjunction with Prof. Whittaker at the Good Samaritan Hospital in Cincinnati.

The work was begun on January 14th and has been continued up to the present time. Fifteen weeks' experience with the remedy is but a short time during which to gather material that shall give us definite results. This is offered as the result of observation during that time, to be taken for what it is worth.

I shall report only those cases in which the remedy was used systematically as treatment, leaving out the cases in which it was used for diagnostic purposes.

The injection of tuberculin, and nutritious diet and alcohol, constituted the only treatment used.

In all, then, there are twenty-nine cases. Two

of these were cases of tuberculosis of the lymphatic glands primarily. As they present many points of interest, I shall dwell on them somewhat in detail.

The first is the case of a young man, age 24. Since childhood he had suffered from repeated attacks of quinsy, and chronic inflammation of the tonsils and pharynx. Three years ago he began to be troubled with enlargement of the cervical lymphatics. This continued and led to the formation of three sinuses, which, when he was admitted, were discharging a slight quantity of thin serous fluid. Eighteen months ago he began to notice cough, with mucous expectoration. This was followed by night-sweats, hæmoptysis and loss of weight.

Examination revealed, besides the general enlargement of the cervical lymphatics, dulness on percussion, with rude inspiration and prolonged expiration over the right apex. Tubercle bacilli was found in the sputum.

The result here has been very satisfactory. The glands have diminished in size, cough and expectoration have disappeared, the patient has gained ten pounds in weight and the anæmia has been greatly ameliorated.

The other case is one of four years duration. The trouble began in the lymphatics of the right neck, extended to the left, involving the entire chain. About eighteen months ago there occurred an enlargement just beneath the left clavicle; it suppurated, was opened, and the sinus formed still remains. This sinus is found to communicate with a small cavity in the left apex. On forced expiration air escapes from the opening. With the exception of the left apex the lungs seem to be free from disease. The pulmonary symptoms began after the disease in the glands.

The progress in this case has been slow but appreciable. The glands have diminished in size. The cavity is diminishing in extent, the sides seemingly granulating and filling it up. After every dose of tuberculin the discharge from the sinus is increased in amount, in cellular elements and bacilli

Both these cases illustrate the infection of the lungs and pulmonary lymphatics, from the lymphatics higher up. In the one the infection probably took place in the tonsils or pharynx.

The importance of attacking such cases in their incipiency is self-evident.

The remaining twenty-seven are cases of pulmonary disease. Of these, 17 were in the advanced stages, of the kind in which but little improvement is to be hoped for. Four of these have died; but neither clinically nor post-mortem was there any sign of an acute exacerbation, or that the treatment had hastened the end.

Ten have remained unchanged. That is, the natural course of the disease has not been influenced to any permanent degree.

Three of these cases show marked improvement. They have gained in weight, and strength. The cough and expectoration have diminished. Night-sweats have ceased and their general health has been improved. This is not due to the psychic effect. Because, as it has been our experience that all the cases do well for the first few weeks, cases have only been counted as improved in which the improvement has lasted beyond the first few weeks.

The other ten cases are cases in the first stage. That is, before signs of breaking down can be observed. Three of these remain unchanged. In these cases while there are no signs of cavities, yet the presence of considerable hectic, and chills, denote that the pus micrococci are responsible for a considerable part of the symptoms, and against these the fluid has no effect.

The remaining seven have all improved. They all show a marked diminution in cough, expectoration, and night-sweats. The dulness of percussion still remains, but the bronchial catarrh has for the most part disappeared. The bacilli in the sputum have become less. They have gained in weight and strength.

Three of these cases have improved to a marked degree, and were it not for the fact that there still may be found an occasional bacillus by the Biedert method, they might be called cured.

We must, however, be very careful in speaking of the cure of tuberculosis. This is not accomplished in a few weeks, and relapses are the rule.

Thus it will be seen that the surgical and incipient cases do the best. Yet there are exceptions to the rule, and if we do our patients no harm, it is but just to give them the benefit of the doubt.

In regard to the diagnostic value of the remedy: This property of the fluid has been called in question of late. In judging of this point we must bear in mind that only a local reaction, a reaction at the seat of the disease, is of diagnostic value. A mere rise of temperature is of no value at all.

We must take a decided stand against the opinion that the use of the fluid is not justifiable for diagnostic purposes. On the contrary, as Prof. Koch has said, in the future the physician who fails to use it and thus neglects to give his patients the benefit of an early diagnosis will be guilty of gross negligence to say the least. One of the greatest sources of good will spring from this property of the fluid. For by its use alone will we be able to discover the very incipient stages of tubercular disease and then treat them to advantage.

In the use of the fluid we have observed certain contra-indications and phenomena that are worthy of notice.

First, in regard to technique.

The Koch syringe has been adhered to as very

easily kept clean, and on account of the accuracy with which the dosage is obtained.

Second, as to dosage.

As a rule we begin 1 mg. and repeat this as often as it causes any rise of temperature whatever. The dose is then slowly increased 1 mg. at a time, avoiding all reaction. This plan has proven to be the wisest. The febrile reactions are not at all necessary, and they cannot but diminish the patient's strength. At first, before we saw the wisdom of this method, we had very severe reactions and the progress was very materially hindered.

By following the plan advised above, the patients by a careful and nutritious diet may be made to gain in weight from the beginning, which they will not do if severe reactions are produced. Indeed those cases have done the best in which there were scarcely any rise of temperature produced during the entire treatment.

The fluid seems to be contra-indicated in cases with intestinal complications. Clinically these cases do poorly, the diarrhœa is increased and the patients diminish in weight and vitality. Post-mortem examinations reveal that perforation is often rendered dangerously imminent, although few such accidents are on record.

In cases in which there is a considerable hectic, accompanied with chills, giving evidence that the complication is due to a septic process caused by the presence of the pus micrococci, the remedy does little if any good.

This, however, does not include all cases with an evening rise. Thus, I have repeatedly seen in patients where the evening temperature reached 101-102 before treatment, after a few weeks treatment the hectic disappears, there being no fever except that caused by the injection. Probably in these cases the fever was caused by the tubercular process and not by the entrance of the micrococci.

Hæmoptysis occurring during the treatment seems to indicate the remission of the remedy for a time. When we consider the histological changes caused by the fluid, the force of not producing an acute congestion in these cases strikes us at once. This complication occurred in one of our patients. The treatment was remitted for two weeks and the hæmorrhage not recurring, the treatment was resumed. There was no further hæmorrhage and the progress of the case is favorable.

Perhaps it would be wise in all cases to remit the treatment for a week at a time occasionally, sending the patient from the hospital. We have noticed the efficacy of this in a number of cases.

The following is a case showing the extreme irregularity of the action of the remedy. The patient is a woman of thirty, pulmonary tuberculosis, primary stage, at the left apex.

On January 25, the first injection of 2 mg. was given; no reaction. January 27, 5 mg.; marked local reaction, cough, dyspnœa, chill, temperature 102½°.

January 29, 5 mg.; local reaction slight, temperature 100½°.

After this the dosage was gradually increased to 4½ cg. on February 15. At no time during this period was there any reaction. February 18, 6 cg. were given and there followed a very sharp reaction indeed, marked dyspnœa, cough, nausea, and vomiting; temperature 104. The next day the temperature had fallen to the normal, expectoration being greatly increased and bacilli more numerous. February 21, 5 cg.; no reaction. February 23, 6 cg.; no reaction.

As seen from the above report we cannot be too careful in increasing the dose even though the reactions be not present.

And now a few remarks as to the opinion in the minds of the profession and laity as to the efficacy of the treatment.

The pendulum has swung to the other side and unlike the mechanical pendulum it has perhaps gone further to the left than to the right. But like its mathematical brother it will swing back and continue to oscillate until it comes to its true point, to the calm and quiet of the middle line. Let me seriously warn against throwing the remedy away. It is too early, we have not had sufficient time to pass final judgment. The most careful observation and study of years will alone give us that.

That the remedy is a specific against tubercular disease no one who has seen its action in a case of lupus will doubt. In so far as regards the science of medicine, the specific character of the remedy may be considered a settled fact. The cure of one case of lupus is sufficient evidence for this.

Everything else, the determination of suitable cases, surgical aid, prevention of accident, are details to be settled by the physician's art. As Professor Koch said, "In all cases, the art of the physician must be allowed free scope in that we shall carefully individualize, and all means known to the physician or surgeon shall be brought to the aid of the remedy."

This is not to be done in a day. We have but to remember our experience with mercury and iodine as specifics against lues. These remedies have been known to medicine for centuries, but it is only within the present generation that we have learned the proper use of them. Perhaps the full benefits of the remedy will be scarcely felt by the present generation.

To continue the above analogy: May it not occur that the history of tuberculosis in the course of a century will undergo the same change? That the disease will lose much of its virulence and that the advanced cases with such extreme destruction of tissue will become a rare occurrence?

This is what we must look forward to and aid with all our powers as physicians.

The objection has been raised that the treatment has in some cases caused a spreading of the disease and acute tuberculosis. Liebmann has stated that he has found tubercle bacilli in the blood of patients treated with the fluid. These examinations have been repeated by Professors Ewale and Guttmann in a number of cases, and no bacilli found. A careful examination of Lippmann's slides have revealed the fact that the glasses used contained traces of old sputum. They had not been sufficiently cleaned.

To the charge that the fluid contained tubercle bacilli, and that we were in danger of giving our patients acute tuberculosis by its use, Dr. Libbertz has replied that there were a few tubercle bacilli in the preparation, but that they had been killed by repeated boiling.

Inoculation experiments have confirmed this statement.

The injection of 2 cg. under the skin of the speaker gave rise to the following symptoms:

Four hours after the injection of 2 cg. under the skin of the left forearm, I experienced severe headache, backache, malaise and nausea. The temperature rose to 99.8, pulse full, 108. The rate of breathing was also increased to about 30. These symptoms continued for four hours, when the thermometer registered 98. That night I slept comfortably; the following morning the arm was sore and tender and swollen. There developed a lymphangitis which lasted for 48 hours. During this time the thermometer reached 102. I suffered from severe headache and malaise. The trouble subsided, however, leaving absolutely no symptoms whatsoever. The effect of the fluid had passed off after twelve hours. The subsequent lymphangitis I attribute to the fact that the syringe used was not sterilized, and secondly that the forearm was not a well chosen place for the injection.

I have learned these points from this experience:

1. To adhere to the Koch syringe, rather than the ordinary hypodermic which I had used in my own case.

2. To appreciate the wisdom of Koch's recommendation to use the interscapular region as the site of the injection.

3. That the injection of tuberculin does not produce any deleterious effects in healthy people. I would like to state that mine was the only case in my experience in which there occurred any trouble at the site of the injection.

Perhaps in a number of cases where acute tuberculosis was found, the remedy had lighted up a number of latent tubercular points, rather than that they had been produced by a scattering of the bacilli from the older lesions. Further study and observation may lead us to avoid such cases in the future. Above all, we are to remember the work and instruction of Professor Koch, and that the chapter on the treatment of tuberculosis is not a closed one by any means.

ON THE CHARACTER OF THE EVIDENCE AS TO THE INJURIOUSNESS OF ARSENIC AS A DOMESTIC POISON.

Read in the Section of Practice of Medicine and Physiology, at the Forty-second Annual Meeting of the American Medical Association, held at Washington, D. C., May 5-8, 1891.

BY JAMES J. PUTNAM, M.D.,
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This communication is an attempt to place in as clear a light as possible, the credibility of the evidence that symptoms of arsenical poison may occur as a result of the ordinary exposures, such as are met with in domestic or civic life.

I shall not try to indicate the frequency with which such poisoning occurs, but only the possibility that it may occur; for the question as to frequency can only be satisfactorily answered when a large body of facts have been accumulated, especially those relating to the obscurer forms of chronic poisoning. The first thing to be done, would seem to be to disprove the opinion which has so much weight, even among those who would otherwise credit the evidence of domestic poisoning, that not enough arsenic could possibly reach the tissues to cause serious effects.

For this purpose I shall show: first, that urine analyses indicate beyond cavil that the exposures of civic life are a very frequent cause of arsenical contamination; next, that our knowledge of the laws of elimination indicates that the excretion of the small quantities which pass off with the urine day after day for months and years, in the case of many persons in the community, implies the presence by accumulation of much larger quantities in the tissues. The dangers attending domestic exposure might, in fact, be fairly compared with the dangers attending the medical use of arsenic, and I shall show that these dangers are usually underestimated. If in the cases of domestic exposure, the single doses are smaller, yet on the other hand, the period of exposure is much greater; the patient is not under the watchful care of a physician; the character of the arsenical compounds sometimes brings special dangers; the place of absorption is often the lungs and not the stomach; and there is some reason to believe, that there are certain very chronic and exceptional forms of poisoning, following the repeated use of minute doses, with which we are not yet thoroughly familiar, and which, in the absence of signs of acute poisoning, are likely to be overlooked.

The dangers attending the medicinal use of arsenic have been underestimated by physicians, partly because of their relative infrequency; partly because the first indications of them (œdema of the face, irritation of the mucous membranes, etc.,) are so familiar, and usually so amenable to treatment, that they are hardly looked upon for what they are, namely, imperative signs that symptoms of more serious import are not far off (as shown by the experiments of Vaudrey).

Again, the effects of habituation, the storage of the arsenic in a temporarily innocuous form (albuminoid compounds of arsenic; Dogiel, International Congress, Copenhagen, 1886), and constitutional indifference to the poison confer as a rule such complete immunity, that those not so fully protected by nature, or with whom the protection ceases after a time, for one or another cause, stand in all the greater danger on account of the false impression of security which is spread abroad, and which makes physicians impatient of studying the obscurer indications of poisoning.

The most important collateral facts bearing on the question of the quantity of arsenic absorbed in domestic poisoning cases, are, as above stated, those obtained by urine analyses, of which large numbers have been made by the chemists associated with Harvard University.[1]

To speak of only the most recent and conclusive series of experiments, Dr. C. P. Worcester, of Harvard University, a skilled chemist and with large experience in this particular analysis, has examined for my brother and myself one hundred and fifty urines, taken from patients most of whom presented certain obscure symptoms, but not such as would have justified the diagnosis of arsenical poisoning, and has found arsenic in more than thirty per cent., in quantities varying from a trace to upwards of .05 mg. to the litre.

About half of these patients were private, while the other half were from the clinic for Diseases of the Nervous System of the Massachusetts General Hospital, and many of the latter were chosen as presenting no arsenical symptoms.

These results conclusively show: *first*, that the community is exposed to arsenical contamination on a very large scale, so that the occasional occurrence of poisoning, due perhaps to special susceptibility, unusual exposure, failure of elimination, etc., need occasion no surprise, and ought to be carefully sought for by every physician; *second*, that the mere finding of arsenic in the urine in a doubtful case does not prove that the symptoms were of arsenical origin.

What does the elimination of these small quantities indicate as to the amount present in the tissues?

[1] Especially Profs. E. S. Wood, C. Harrington, W. B. Hills, C. R. Sanger, (now of Annapolis Naval Academy), H. B. Hill, C. P. Worcester, A. M. Corney.

It was formerly believed that arsenic differed from lead in being eliminated rapidly and in not uniting with the tissues. Both of these opinions are now disproved. Arsenic has been found in the liver bones (Gibb) six months after the cessation of a course of arsenical treatment (which, by the way, led to the patient's death); it has been found in the urine even nine months after the apparent removal of the patients from exposure in "domestic" cases; and Prof. E. S. Wood has recently found traces in the urine as long as three months after cessation of a short course of arsenical treatment (these experiments are not yet concluded, and I quote a verbal statement only as relating to one or two cases).

Arsenic does then, in some cases at least, tend to accumulate, and the daily elimination of .03 to .3 mg. (gr. $\frac{1}{2000}$ to $\frac{1}{200}$, computed by supposing two litres of urine to be excreted daily, and to contain two-thirds of the whole elimination of the arsenic), must indicate the presence in the tissues of quantities quite large enough to cause poisoning, provided it should become active all at once, or provided that for any reason the elimination should be checked.

That the effects of arsenic—like those of lead, and phosphorus—are in a measure dependent upon the action of the stored up poison, is shown by the fact that the symptoms of medicinal poisoning often appear only when a given dose has been taken for some time, after which the patient is apt to show an increased sensitiveness (though this is not regularly the case). In the case of lead it is a matter of common knowledge that sudden outbreaks may occur after lead drinking water has been used for a long time, as well as among the workers in lead mines. In the case of arsenic, it is quite common to find the paralytic symptoms breaking out days or weeks after a single large dose or repeated smaller doses.

Is the use of arsenic in maximum therapeutic doses unattended with danger?

This is by no means the case, although the doses used are far less, at their largest, than those taken by the Styrian peasants with impunity.

Habituation to large doses may by care be brought about, but in the attempt to do this the lesser symptoms of poisoning are frequently excited, and the graver symptoms occasionally.

No doubt there are but few physicians who have had these graver symptoms in their own practice, but this is certainly because they have taken pains to avoid them, for the experiments of Vaudrey upon himself and others, have shown that by increasing a little further the doses which excite the lighter symptoms, serious prostration and local symptoms regularly follow. A few years ago I collected a number of the severer cases of medicinal poisoning,[2] and I give here a few of them in brief outline. The cases of

[2] Boston Medical and Surgical Journal, March 7, 1889.

paralysis are especially noteworthy because these are now known to occur frequently in arsenical poisoning of a certain grade, and, as we shall see, they reappear among the cases of "domestic" poisoning.

1. Gaillard: Typical arsenical paralysis following full doses of Fowler's solution, increased to the limits of tolerance and administered for five weeks.

2. Canada Med. and Surg. Journ., 1886–1887, v. 15, p. 716. Arsenical paralysis, ending fatally, after large doses (℥xx to xxx) of Fowler's solution. The autopsy showed the presence of neuritis.

3. Hastings: Arsenical paralysis with neuritic symptoms, following ℥ iij to v of Fowler's solution continued for some weeks.

4. Gibb: Long course of arsenical treatment ending in neuritis, causing disorders of sensibility, pain, and paralysis. The patient died six months later, having taken no arsenic in the interval, and traces of arsenic were found in the liver and bones.

5. Dublin Quarterly Jr., v. 36, p. 474. ℥iij of Fowler's solution, were taken daily for ten or twelve months, at the end of which time "symptoms of acute arsenical poisoning" came on, ending rapidly in death.

6. C. L. Dana: Arsenical paresis with ataxia. ℥xxx of Fowler's solution three times daily, in spite of the fact that the dose had been gradually increased.

7. Hooper: ℥ v of Fowler's solution were given three times daily for eight months. Toward the end of this time the following symptoms came on and increased, ending three months later in death;[3] conjunctivitis with œdema, tachycardia, tremor, excessive and progressive prostration, insomnia, irritation of the trachea and larynx.

8. Jones: ℥ v to x v of liquor arsenicalis given three times daily; at the end of a month, intense gastro-intestinal irritation, scanty urine, trophic changes in the legs, sensory and motor paresis.

9. Burne, cited by Taylor: Gr. $\frac{1}{20}$ of arsenious acid daily for four days; then, inflammation of the stomach, delirium, debility and exhaustion.

10. Taylor: Gr. $\frac{1}{30}$ of arsenious acid taken twice daily for seven days, then, "sickness," irritation of the skin, and eczema over the whole body.

11. Taylor: ℥ x of liquor arsenicalis chloridi (said to be a very poisonous preparation) taken three times in the course of twenty-four hours; then, constriction in the throat, pain and irritation of the stomach and bowels, tingling and numbness of the hands and feet, with paresis; extreme depression; gradual recovery.

12. Personal Observation: ℥iv to v of Fowler's solution taken three times daily for six weeks; then there came on extreme prostration, pains of severe character in the extremities, widespread muscular atrophy, and paralysis, so severe that the patient was helpless for many months. During the worst of his illness he inhabited a room with a highly arsenical paper. I consider this case as especially important because it was possible to eliminate, as satisfactorily as this can ever be done, all the other causes of neuritis. The patient was a gentleman in good circumstances, not syphilitic, not tuberculous, with no lead in the urine. He had had no acute diseases, no grippe, no anæmia; and the symptoms came on during the pleasant weather of June.

Of course this handful of cases does not prove that arsenical paralysis is common from medicinal doses, but only that it occurs.

There are, however, three obvious reasons why we do not have more such reports: 1. The watchfulness of physicians; 2. The failure to recognize the nature of the cases seen; 3. Unwillingness to report unfavorable results.

Imbert Gourbeyre says that many cases of paralysis occurred in the last century when arsenic was used so freely in the treatment of intermittent fever. He does not give references, however, and I have not yet fully studied this point.

Dr. Winkler, of Altenburg, writing in 1811, quaintly reports a case of paralysis of the legs occurring in the practice of a colleague, after an arsenical treatment of intermittent, but "does not believe" it was due to arsenic, and is obviously wholly unfamiliar with the characteristics of arsenical paralysis, now so well known.

This would be a suitable place to introduce, by way of comparison, the recorded cases of paralysis due to domestic exposures.

I have not, however, undertaken, in this paper, to bring forward the clinical evidence indicating the frequency with which arsenical symptoms occur, but only such as would present as strongly as possible the fact that they do occur.

For this reason I shall confine myself to my own experience in speaking of arsenical paralysis (and other signs of neuritis). I will note, however, that a number of such cases are on record. Alexander, of Breslau,[4] for example, in a recent pathological monograph on arsenical paralysis (1889), considers nine cases to have been of "domestic" origin, out of fifty-eight which he selected from a much larger number of general analysis.

The cases which I have seen myself, several in number, were mainly light cases, as might be expected, and for that reason less conclusive. I

[3] It has been abundantly shown by the history of acute arsenical poisoning that symptoms once inaugurated may continue and increase, though no more arsenic is taken. The paralysis, for example, often fails to appear for days or weeks, and even months.

[4] Boston Medical and Surgical Journal, March 7, 1889.

therefore report but two, one of which has been published.[5] (Atwood.) This is the case of a lady 43 years old, and of naturally good health,[6] except that for a year or two she had suffered from severe colds and from "indigestion."

The new symptoms began about six weeks after her return from a vacation, at which time she had moved into new rooms, which were afterwards found to be papered with a highly arsenical paper.

The symptoms consisted, first, in severe abdominal neuralgia, recurring every morning and passing away in the afternoon, and not attended with signs of indigestion. This continued for nine months, but before the end of this period she began to lose sleep and appetite, and to notice tingling sensations in the fingers, lips, tongue and feet. The hands and wrists became sensitive on pressure, and whenever she was recumbent the arms used to "go to sleep." Writing, formerly easy, became a labor.

The dynamometer registered R. 55, L. 17, instead of 30 to 50 as might have been expected; hyperextension of the right hand and fingers was very poor; there was tremor of both hands; the electrical reactions of the extensors, especially those of the right arm, were markedly impaired.

The patient has been under observation for the past two years, and had been known to me for several years before. Arsenic (but no lead) was found in the urine three or four times at intervals of many months, at first in relatively large amounts, afterwards in traces, until finally it disappeared.

The health gradually improved after removal from exposure, except that a moderately severe facial spasm has been present ever since. The general health has once or twice given way to some extent under hard work, but the special symptoms have never returned. I omitted to say that at one time the sensibility of the right finger tips was found slightly less than that of the left. The dynamometer finally registered $\frac{R}{L}$ 35.

I consider this case of special value for the reason that while evidently an instance of neuritis, the morbid conditions would certainly have been overlooked but for careful examination. Careful electrical examinations in doubtful cases would very likely reveal slight changes of great diagnostic importance, since we know, both from experimentation with animals, and from clinical observation, with both lead and arsenic, that there is a period when neuritis is latent as regards paralysis, and yet is discoverable by electrical tests and by the microscope.

Far more numerous than these characteristic cases of arsenical neuritis, are of course the lesser and obscurer symptoms, and they are also really of far greater importance just because they are obscure. I shall not occupy space by discussing them, because physicians at large are not yet in the mood to consider them without prejudice, and my present object is solely to allay that prejudice. I will only remark that we have good reason to believe, not only from the history of domestic poisoning, but from medicinal, and accidental, and homicidal cases, that in chronic arsenical poisoning, or in the chronic remains of acute poisoning, two tendencies are occasionally manifest; one to relatively isolated impairment of special organs or functions (tachycardia, sexual impotence, loss of voice, irritation of the kidney, localized neuralgia, herpes zoster and other affection of the skin, etc.,); the other to anæmia, or the impairment of the general nutrition, without marked local symptoms.

This latter tendency has seemed to me especially important as occurring among infants. I have, however, also seen, in consultation, in a child of two years, a generalized neuritis, with impairment of the electrical reactions, apparently due to arsenical poisoning. What is the source of the arsenic in the cases of domestic poisoning; and in what form does it act?

These questions are still unanswered, but no candid person can doubt that papers (mainly those of older date) and fabrics are mainly responsible. Probably it comes little by little from many sources and acts after accumulation. In the case of a lady, under my own care, a severe eruption, of inflammatory vesicular character, broke out all over the face and neck. She was seen by an experienced dermatologist who pronounced the eruption not eczematous, and found traces of arsenic in the scales removed from the skin. I found traces of arsenic in the urine and a large quantity in the covering of a reclining chair in which she habitually sat. The patient was subject to universal eczema, and had proved susceptible to arsenic given internally. Perhaps for these reasons the skin was unusually sensitive.

The theory that the arsenic sometimes occurs in a gaseous form cannot yet be set aside; and the mode of introduction (i. e., by the lungs) may perhaps increase its immediate violence, just as Alexander (l.c.) found that when injected under the skin of the shoulder in animals it had more constitutional effect than when injected into the peritoneal cavity. At any rate, the urine analyses prove that it comes from somewhere and accumulates in quite a quantity; and the clinical analyses prove that it may cause serious and characteristic symptoms, and a great many more slight but very troublesome and often chronic and obscure effects.

[5] Inaugural Diss. on Arsenical Paralysis. 1889.
[6] For details see the published report. Boston Medical and Surgical Journal, March 7, 1889.

MEDICAL PROGRESS.

Obstetrics and Diseases of Women.

DANGERS OF VAGINAL INJECTIONS. — DR. ROULIN, (*Journal de Médecine de Paris*, December 13, 1890), describes three cases where women suffered from severe symptoms after the use of vaginal injections, administered by themselves when in a sitting position. The first used the douche can,—fixing it rather high on the wall. Immediately after the injection violent hypogastric and lumbar pains set in, followed by vertigo and vomiting. The abdomen was not sensitive on pressure, though the pain was intense. Metrorrhagia followed and lasted for two or three days, but the pain ceased in twenty-four hours. The second case was almost precisely similar, excepting that the patient had used a hand syringe, and the symptoms were less severe. The third case also used a hand syringe. She felt a pain like a blow across the belly, but continued the injection; when it was ended lumbar and abdominal pains came on severely with rigors and chattering of the teeth, but no vomiting. The symptoms recurred on the next day when the patient got up, but on the third day she felt well and free from pain. Dr. Roulin employs laudunum enemata for these cases. The cause of the pain is obscure. The fluid rushing into the uterine cavity may act as a foreign body and set up conditions sometimes provoked by catheterism. The admission of air into the uterine sinuses has been, according to Depaul, the cause of sudden death during douching of the cervix to produce abortion. Dr. Roulin believes that water may have entered in his cases. He insists that patients must be taught how to administer vaginal injections to themselves. The patient must lie on her back and only introduce the nozzle for a short distance; nor must she play too strong a jet of fluid into the vagina.—*Archives of Gynecology.*

Pathology.

THE PIGMENT OF MELANOSIS.—DR. FELIX LAGRANGE, in a paper read before the Société d'Anatomie et de Physiologie de Bordeaux, Dec. 8 of last year, described some investigations he had made as regards the distribution of the pigment in two melanotic tumors. One case was that of a melanotic sarcoma which had been removed from the orbit, and the other was a tumor of the eyelid. Microscopic examination showed the same structure in both cases, but the tumor which had developed in the orbit was more deeply pigmented than the other, though the distribution of the pigment was morphologically the same in each case. Sections of both tumors exhibited fusiform cells and many embryonic elements. A few vessels were seen, but there were no hæmorrhagic foci. The pigment was intracellular. In some cells it was completely absent, whilst others were so full as to lose their characteristics, and to appear as black round masses; other cells, again, contained in their protoplasm fine black granules. In order to study the nature of this pigment it was necessary to isolate it from the cellular elements. By treating a section with sulphuric acid, the cellular elements were partially destroyed. Under the influence of this reagent the sarcomatous tissue became shrivelled, remaining as a translucent structureless mass, in the centre of which was the pigment. Nitric acid was next tried; but, although the structure of the tumor was completely destroyed, there still remained a whitish residue in which the pigment remained entangled. In order to obtain a pure preparation of melanine the following process was adopted with success: Having treated a portion of the tumor in which the pigment was abundant with pure sulphuric acid, it was placed, still saturated with the reagent, for twenty-four hours in a moist chamber. In this way the now plastic tissue was partially liquefied, some glycerine was then added, and the containing vessel closed for forty-eight hours. At the end of that period there remained nothing but the pure pigment. It presented three principal forms: 1. Some black masses, evidently formed by the union of a series of granules, separated by unequal intervals, the spaces being filled by a transparent cement which had been unaffected by the acid. These masses were the remains of those cells which had appeared to be entirely filled with pigment. 2. Fine disseminated granules, which were rounded and very numerous. 3. Small irregularly shaped particles, for the most part angular, but presenting considerable variations in their form and size.—*The Lancet.*

Dermatology.

DR. L. BROCQ (*Journ. of Cutan. and Genito-Urin. Dis.*, No. 102, March, 1891), presented to the French Society of Dermatology and Syphilography, December 11, 1890, a patient affected with a band of scleroderma extending from the upper third of the right arm to the thumb, forming a *plaque* 3 to 6 centimetres in width, and of great thickness. The patient, a cutter, could use his scissors only with great pain. Treated by Dr. Besnier in several ways without result, he was referred to Dr. Brocq in June, 1890, who up to December 1, gave him fourteen sittings of electrolysis, each treatment comprising twelve to sixteen punctures, principally in the lower portion of the *plaque*, but sometimes in the median portion. The affection was arrested and has not since increased. The arm moves more freely and the *plaque* has diminished one-half. Treatment was interrupted through August and September, but the affection did not increase, thus proving that it is not necessary to make the sittings close together.—*British Medical Journal.*

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LONDON OFFICE, 57 AND 59 LUDGATE HILL.

SATURDAY, MAY 30, 1891.

YOUR MANUSCRIPT, PLEASE.

The primary province of this journal is to publish the proceedings of the annual meetings of the American Medical Association, and in order that all the members and readers of THE JOURNAL may see the papers and discussions at the earliest possible date, it is necessary that the Chairmen and Secretaries of each of the Sections shall at once transmit to the Editor of THE JOURNAL all matter in their hands for publication.

If this is done immediately, it will enable us to publish all the matter of each Section in consecutive issues, and then to make a separate reprint of the work of the several Sections for the special use of those who attended the meeting and are recorded as taking part in the Section work.

This will add very much to the value and interest taken in a work that should reflect the thought, observations and researches of many of the ablest men in our profession.

The success of the purpose will depend entirely upon the active coöperation of the officers of the Sections.

We want all the matter now, while it is fresh and of immediate interest.

The member who is holding his paper for revision and completion, and is also possessed of an idea that the adoption of such a plan will cause an early shortness of copy in THE JOURNAL office, is away off in his estimate of the amount of scintillations that are constantly emanating from the brains of more than eighty thousand practicing physicians.

BUSINESS.

Business is business, at least that is what all business men say, and the merchant, manufacturer, trader or professional man who can in one year double the value of his business by making a grand effort and don't do it, is usually regarded either as a little off, or entirely too slow to catch on to the good things that are gliding by on a rapid transit motor.

There is in this country a grand body of more than eighty thousand members of the regular medical profession, every one of whom is in some degree a debtor to the American Medical Association, and either directly or indirectly claims an affiliation with this organization. Those who directly claim the benefits have become permanent members. This number has now reached six thousand. These six thousand members own a valuable property in this Journal, each holding a single share of stock and no more. It is possible and very easy, for every one of the six thousand shareholders to induce one of the indirect beneficiaries to become enrolled as an active owner of this valuable property. The simple addition of six thousand more members will very much more than double the value of the present property, and another possible and similar increase will send THE JOURNAL ahead and beyond any similar publication in the world.

This is a reasonable and easy thing to do. Not to do it is to be counted a "little off" and too slow to take advantage of a good thing within easy reach.

This is business, and business is business.

HOUSE BUILDING AND SANITATION.

With the growth of population in cities there is a corresponding increase in the value of real property. This increased value of real estate is naturally followed by high rents, and in order to realize the largest possible revenue from a limited number of square feet of ground, the owner feels justified in erecting a building that is fairly a sky-scraper. And this without the slightest regard for the rights of his next door neighbor or the general public. Such buildings effectually darken adjacent structures by shutting off a goodly portion of God-given sun-light. They also impede a free circulation of air.

In the outskirts of the business section, elegant and inviting apartment houses are built, and in which are said to be found all modern conveniences, such as bath, water-closet, etc. These are necessary belongings in every modern city house, and in order to insure the health of the inmates, the location and construction of the plumbing work of such apartments is of the very first importance.

Our attention has been drawn in this direction by observing the great frequency with which the water-closet is stuck in an absolutely dark and unventilated niche or corner, and in many instances opening directly into the kitchen or pantry. Physicians visiting patients may with perfect propriety inquire as to the arrangement of the bath and water closet, and condemn or approve as his judgment may dictate. Many cases of sickness are directly traceable to just such causes.

One of the building inspectors should be a physician who is not only skilled in sanitary affairs, but who is also endowed with a knowledge of architecture so far as it pertains to all sanitary conditions of any building.

Practicing physicians are more or less accustomed to uninviting sights and noisome odors, but, for one moment think a little,—just a very little of the wafting odors of a freely used and unventilated water closet opening into a kitchen where an omelet, or batter for griddle cakes are being prepared; or into the pantry where the butter and milk are acting as sponges in silently mopping up the foulness in the air.—Bah!

THE MEDICAL CONGRESS OF CUBA.

The second Medical Congress of Cuba will be held in Havana in January, 1892, under the presidency of DR. JUAN SARTOS FERNANDEZ. This new organization is one of very high order and represents the strongest professional elements of the country. The published regulations show that the qualifications for membership are very high, requiring in addition to medical graduation, the possession of either an academic degree or the record of original work meriting the approbation of the Congress. The Congress meets every two years in the month of January. Papers are limited to fifteen minutes and discussion to five minutes for each speaker. Papers may be read in Spanish, French, or English.

The preliminary program announced for next meeting shows an important selection of topics. "The Etiology, Prophylaxis and Treatment of Yellow Fever," is an inexhaustible theme for Cubans. "The Influence of Malaria upon Pregnancy, Parturition and the Puerperium," is a subject of vast importance, not only to peoples of the tropics, but to the inhabitants of peludal districts in the temperate zones. "The Experimental and Clinical Study of Chronic Diarrhœa" will doubtless comprise a report of value to all practitioners. "The Abuse of Alcoholic Beverages in Cuba" will no doubt elicit about the same state of affairs that we find in this country, particularly when the subject is studied as is purposed with reference to "common causes and pathological manifestations." "The Pathology of Diphtheria and its Relation to Treatment" suggests a theme in rational therapeutics that is of wide-spread interest. In addition to such formal discussions papers will be presented on topics in every department of medical practice. The practice of announcing subjects for discussion ten months in advance of the meeting is a good one, and might be emulated with profit by medical associations in the United States.

HIGHER MEDICAL EDUCATION.

At a meeting of the Board of Trustees of the University of Pennsylvania held May 21, Dr Pepper made an offer of $50,000 towards an endowment fund of $250,000 and of $1,000 annually towards a guarantee fund of $20,000 annually, for five years, conditioned upon the establishment of an obligatory graded four year course of medical study. This was accompanied by a communication from the medical faculty pledging themselves to carry out this proposal and to enter upon the four-year course in September, 1893. It was also reported that the members of the medical faculty had themselves subscribed $10,000 annually for five years to the endowment fund. The Board of Trustees expressed approval of the proposed advance in medical education, but postponed their assent until the success of both funds had been demonstrated.

DR. PEPPER and his associates in the faculty of the medical department of the University of Pennsylvania are evidently determined to do their part in solving the vexed question as to the best method of giving and attaining a higher medical education. It is with a good degree of pleasure that we note the disposition manifested on the

part of the best medical colleges to form practical connections with established universities. This is the first step necessary, before making an appeal for endowments of chairs, scholarships, and laboratories.

The medical department of a University with an ample endowment, ensures a proper preliminary examination, a thorough course of instruction, followed by the granting of a degree that means something.

EDITORIAL NOTES.

SMALL-POX IN HAVANA.—The last issue of the *Revista de Ciencias Medicas* of Havana announces fifteen deaths from small-pox in that city during the month of April. Dr. Laguardia, of the Sanitary Department, announces that the disease is spreading.

HIGH BUILDINGS.—We are glad to observe that a discussion is going on among the architects and engineers of Chicago, relative to the safety of the extremely high buildings which are in course of construction in this and other large cities. This is a subject of the utmost conceivable importance. The fall of such a structure when filled with an army of workers would be a calamity of the greatest magnitude.

While we are ever ready to utter an encouraging word to those who are engaged in all laudable enterprises, profound consideration must be given to any conditions which jeopardize and hazard human life.

The sanitary arrangements of such buildings are usually first-class and as perfect as art can make them.

SOCIETY PROCEEDINGS.

American Academy of Medicine.

The sixteenth annual meeting of the American Academy of Medicine was held at the Arlington Hotel, Washington. The opening session was on Saturday, May 2, the meeting continuing through Monday the 4th. The wisdom of holding the sessions of the Academy in connection with those of the American Medical Association was demonstrated by the attendance: it was the largest meeting in the last seven years. The attention of the Fellows was directed to those three items, the Reports of Committees, the reading and discussion of papers, and executive business.

Dr. J. E. Emerson, of Detroit, reported for the committee on Eligible Fellows, of which he is chairman. The practical results of the workings of this committee is seen in the list of Fellows elected, most of whom were investigated and invited by the committee. The committee emphasizes in their report, the necessity of every Fellow considering himself a coadjutor of this committee.

The Committee on the preparation of a catalogue of Fellows, submitted two forms for arranging the names and the facts to be presented, asking directions from the Academy before additional work should be done.

The Committee on the publication of transactions suggested the issuing of an occasional Bulletin containing such papers, reports or information as the Academy would from time to time desire to publish.

The Committee on the comparative value of Academic degrees presented a voluminous report. This committee had addressed a circular letter to all the colleges in the land asking for certain facts and opinions. The report endeavored to tabulate the replies from over a hundred of them. The reports were referred to the Council, who subsequently made certain recommendations to the Academy, as will be seen a little later.

The only paper read on Saturday was entitled "The American Practitioner Abroad." It described the present status of an American physician who desires to practice in Great Britain, called attention to the fact that, while parliament enacted that after a date to be fixed by her Majesty's Council, certain foreign qualifications would be admitted to registration, the Council had never fixed the date and the enactment was a dead letter. The paper suggested that the Academy endeavor to secure reciprocity in the matter.

The more important papers were read at the session on Monday morning, the first by LEWIS H. STEINER, M.D., of Baltimore, Md., entitled

WILL A SHORTENING OF THE COLLEGE CURRICULUM CONDUCE TO BETTER PREPARATION FOR THE STUDY OF MEDICINE.

1. We are told that one great advantage will result from a shortened course, viz., the student can begin his professional studies at an earlier age and so assume the responsibilities of practice while yet young. But is it not a well known fact that youth is frequently cast up against the young doctor as an unpardonable defect in his professional make-up? Experience is sought for by a prudent public. There is now no greater urgency for this rapid creation of doctors than has existed for years, although there is a demand from the medical profession and the laity that the best preparation possible should be had by the intending doctor—that he should be a man of broad, well-rounded general culture and thoroughly trained in the principles of the profession.

2. It is said that the period of study must be diminished because students enter college now at a more mature age than in former years. But President Angell, of the University of Michigan, says that the age of entrance in his institution is not increasing but diminishing. Probably Ann Arbor fairly represents in this particular the great body of American colleges. If, however, the statement be correct it would not affect the subject very materially. Indeed, the question of age has not been raised by the advocates of full academic preparation. It is one solely of preparation, and this is believed to be best secured by the training that has heretofore produced satisfactory results. The routine of work must be adapted to the average man. The brilliant scholarly mind will compass it easily and will be able to supplement it with other important additions to his preparation for subsequent professional study, while there may be some who cannot keep abreast of the lowest requirements, and who must necessarily drop out of the struggle. This unequal contest must be expected and should the mental capacity in any case be too small to compass the college curriculum, what kind of addition to the medical profession would its owner ordinarily make? The present need is not that of mere numbers. Quality and not quantity is looked for. Possibly in this country we are so impatient of slow processes that our tendency is to superficialty. The English, the German and the French are more content to work slowly. The result of this is better all-around preparation for whatever they undertake.

The plan proposed will not conduce to the favorite object of the academy. It will accomplish nothing but an increase of college graduates. The value of the "A. B." degree will become an uncertain quantity.

This conclusion must be reached—that there must be some general consensus among medical colleges as to the nature and amount of the preliminary study and that the fact whether sufficient acquaintance with it has been attained by the applicant must be determined by some examining board. Should such board be composed of the faculties of medical colleges, or of professional men who are invested by the state with authority?

CHARLES MCINTIRE, A.M., M.D., of Easton, Pa., read a paper on

AN ATTEMPT TO DETERMINE THE IDEAL PREPARATORY COURSE OF STUDIES FOR THE LEARNED PROFESSIONS.

College education should train the mind and provide an amount of general information. The pupil himself and the personality of the teachers are important factors in an educational scheme, but as they cannot be weighed they must be treated as a constant factor in a mathematical problem. The educational world in Germany and England as well as in the United States is in a state of unrest. With us the assigned cause is that it takes too long for a man to take a complete course and to enter upon professional life.

The plan suggested in this paper was gleaned from the opinions of a large number of college presidents obtained by private correspondence. The American system of education is not a system organized by a previous plan, but we should remember that every prolonged educational training should comprise the study of the essential studies for an educated man, having but one course so that upon its completion one can either go into business or enter college, as the case might be. This would rather shorten this period, but the pupil would enter without break into college, and in one of several courses pursue his studies with a view of mental discipline and general information. His special studies, whether professional or otherwise, would be continued in the universities, and no candidate would be admitted for a university degree unless they already possessed a college degree or could pass an examination upon the college studies. The conclusion emphasized the fact that the paper was but an imperfect representation of the thoughts of others.

The third paper was on the

GENERAL EDUCATION OF THE PHYSICIAN,

by DAVID STARR JORDAN, A.M., M.D., President of the University of Indiana, Bloomington, Ind.

The A.B. degree, as generally understood, is an index of general culture. With the improvement of our educational methods the requirements for this degree have been steadily advanced. The result is that the student who has spent all his life in the schools is not through college before the age of 22, and the man who is forced for any reason to interrupt his school work may be anywhere from 25 to 30 on graduation. This fact has led to a demand for the shortening of the college course in the interests of practical life. That the college course is too long is practically the verdict of the medical colleges and of the great body of physicians themselves. The medical colleges have made the preliminary training a matter of luxury rather than of necessity by putting into the same classes the graduates of colleges and persons who come from the country district school.

The physicians of our country say the same thing, for the number of college-bred men in medicine is lower than in almost any other profession (clergymen 1 in 4, lawyers 1 in 5, physicians 1 in 12). Of all classes of students those in medicine are, as a rule, the most reckless in their mode of life, and the most careless of the laws of hygiene and of decencies in general. This is not so true now as it was a few years ago, and for

this change the rising standards of our medical school are certainly responsible.

A writer has lately maintained that a man without independent means should not study medicine. The physician can no longer be sure of earning his living in our cities, on account of the competition of free dispensaries. But skill and wisdom will always be valued and paid for.

It is said that physicians are not taking their share in the progress of science. If this be true, and if they are deficient in general culture, may not these facts be associated? May we not have here the relation of cause and effect? Is not the remedy to bring in better men? To shut out the ignorant, trifling and unambitious, the tinker and the job worker, and reserve the training of our medical schools to those who can bring to their work the instincts, the tradition and the outlook of the scholar? The general culture of the physician should have its roots in the work of the college. If we require or recognize collegiate attainments at all, the A.B. degree furnishes the only available method by which general culture might be indicated. This standard is not absolute. It means something different in one college from what it does in another. It does not mean to-day what it did ten years ago, or what it will mean ten years hence. The value of the degree is not to be determined by the percentage of required work in any study. The essential fact is the extent to which the spirit of the scholar has been inspired in the student, and this varies in every case with the difference of teacher and scholar.

Is the standard of the A.B. degree too high for professional work? No such view can be sustained by statistics. The educated physician is the man of science; the uneducated the empiric, the quack. Our medical schools seem to think otherwise, for if general training is important the schools should insist upon it. This condition of things has two causes: 1. Most of our medical schools are scantily endowed. When a medical school is well endowed it can exact the standard the good of the profession requires. 2. The medical student has shunned the college because of the tremendous waste involved in any course of study inflexibly pre-arranged. This waste is threefold: *a*. The time spent on subjects in no wise concerned with the future study of the subject. *b*. The time spent on subjects for which the student has no aptitude. *c*. The waste of subjects taught by dull teachers, dry, dreary, or mechanical.

If our medical schools cede four years to the culture of the colleges they have the right to ask that the colleges waste no time. The college should furnish such means of study that the future student shall not go to the medical school ignorant of the use of the scalpel and the microscope. He should also know the general facts and theory of chemistry, and the processes of chemical manipulation. The elements of botany should be in his possession, and the facts of comparative anatomy, the great laws of life of heredity, variability, and response to external stimulus which form the basis of organic evolution. He should know what is meant by scientific investigation and should know how to use it. He should be able to write and speak good English and must read French and German. If the college permits the medical student to get a fair return for every hour he spends, the requirement of a college degree at the door of the medical school will shut out no unworthy man, nor will it hold back any in the race for life.

We may fairly regard the various degrees (A. B., B. S., etc.) given by the various colleges as alike in value, and leave the adjustment of their relation to the colleges themselves. Against spurious degrees the Academy of Medicine must be on its guard. *Scholars* can be made neither by driving nor by coaxing. In any profession the inspiration and example of educated men is the best surety that the generation which succeeds them will be likewise men of culture.

The discussion of these papers was opened by Dr. F. R. Gerrish, of Portland, Me., and continued by Drs. Herdman, of Ann Arbor, Mich.; Marcy, of Boston; Connor, of Detroit; Hill, of Iowa; Snidsley, of Kentucky, and others.

The Annual Address was delivered by the retiring President, THEOPHILUS PARVIN, A.M., M.D., LL.D., of Philadelphia. Dr. Parvin's "ruling passion was strong in death," his subject being "*Miscarriages*." Unfortunately, it is a paper that does not bear abstracting, it is too concise in its entirety. The miscarriages spoken of were those of medical books, medical journals, the work of medical societies, of medical colleges and of medicine itself. Of medical books but one fifth give any recompense to the author, and at the best but a dollar a page. A still smaller proportion of medical journals pay even indirectly, and many of them likewise fail in the true work of journalism.

Medical societies, while organized for the purpose of general professional improvement, sometimes are made to promote individual interests. As to medical colleges, even in the best sometimes an unworthy man secures his doctorate. And even in medicine itself, sometimes there is a failure to cure. Methods of treatment come into the world but to die because of imperfect development. Bacteriology, perhaps, has received more attention than it deserves, and in the years to come it will not be as prominent as now. The address was concluded by an argument against vivisection as a method of medical investigation, since its results are not, without clinical confirmation, reliable, and that clinical observation is and has proved itself to be amply sufficient for the purpose.

In its executive sessions the Academy elected to Fellowship the following gentlemen:

Drs. A. B. Dundor, P. J. Surtam, N. W. Richard, L. P. Smock, A. H. Halberstadt, of Pennsylvania; G. A. Hare, J. W. Lash, G. E. Smith, F. House, C. L. Van Pelt, of Ohio; Christian Fenger, B. M. Behrens, C. M. Hansen, A. Holmboe, L. H. Mettler, of Illinois; W. W. L. Phillip, H. R. Baldwin, George Peck, of New Jersey; W. Rider, J. C. Edgar, M. N. Bemus, G. W. V. Van Voast, M. Filter, Chas. G. Cumer, of New York; S. W. Turner, J. K. Mason, of Connecticut; J. B. Brasseur, R. Peterson, V. C. Vaughan, J. N. Martin, of Michigan; A. H. Wright, of Canada; J. R. Lewis, of Iowa; W. H. Harris, of Kentucky; A. C. Rogers, J. H. Darcy, of Minnesota; Willard Springer, of Delaware; Charles Denison, of Colorado; W. R. Cluness, J. R. Smith, of California; J. F. Keeney, of District of Columbia; J. T. Green, of Arizona; and D. A. Sargent, of Massachusetts.

There were three amendments to the Constitution proposed, two of which were postponed for a year; the other, permitting the election to office of Fellows not present, was adopted.

Two years ago an amendment was adopted permitting the Council to accept other evidence of a preliminary medical education than the degree of A.B. This year, at the recommendation of Council, the Academy adopted the suggestion of the Committee, defining the nature of the evidence. Applications upon the equivalent clause must show that they have had a period of residence at some college of arts or sciences. If they are graduates, then the degree possessed must be, in the opinion of the Faculty, fairly equivalent to the A.B. degree. If the applicant has not graduated, then there must be a certificate from the Faculty of the college as to the standing of the applicant while in college, and the time of residence.

Steps were also taken for the adoption of a minimum standard for the degree of A.B.

The officers for the ensuing year are:

President—Phineas S. Conner, of Cincinnati, O.

Vice-Presidents—R. Lowry Sibbet, of Carlisle, Pa.; George J. Fisher, of Sing Sing, N. Y.; Henry M. Lyman, of Chicago, Ill.; Louis S. McMurtry, of Louisville, Ky.

Secretary—Charles McIntire, Easton, Pa.

Assistant Secretary—E. M. Green, Easton, Pa.

Treasurer—J. Cheston Morris, Philadelphia.

After a satisfactory disposition had been made of the weightier matters, the Fellows in a lighter vein indulged in reminiscences of former spreads, and enjoyed the good things placed before them in the spacious banquet hall of the Arlington.

The time and place of the next meeting will be determined by the Council.

DOMESTIC CORRESPONDENCE.

Observations on "Koch's Lymph."

156 Washington ave., cor. Camp st.
NEW ORLEANS, LA., April 28, 1891.

His Excellency BENJAMIN HARRISON, President United States of America, Washington, D. C.

Sir:—I have the honor to acknowledge the following:

"Executive Mansion, WASHINGTON, D. C.,
January 19, 1891.

Professor JOSEPH JONES, Charity Hospital, New Orleans, La.

My Dear Sir:—At the President's direction I beg to send you by express, to-day, one vial of Koch's lymph for such use as you may deem wise to make of it.

It was forwarded to the President by the American Minister in Germany. Very truly yours,

E. W. HALFORD, Private Secretary."

I beg leave respectfully to submit to your Excellency the following brief report on this vial of Koch's lymph.

The small vial of Koch's lymph containing about five grams (about seventy-six drops) of a dark brownish red liquid, accompanied by directions for its use, signed by Dr. A. Libbertz, of Berlin, Germany, was delivered to me in person, at my office, 36 University Place, by the express agent.

Holding that your Excellency designed this humane bequest, not for private ends, but for the benefit of suffering humanity, and the promotion of scientific inquiry, I placed a portion of "Koch's lymph" contained in the small vial, at the disposal of the medical and surgical staff of the Charity Hospital, of Louisiana, as will be seen from the following correspondence:

[Official business.] 36 University Place,
NEW ORLEANS, LA., Jan. 22, 1891.

Professor A. B. MILES, M.D., President Surgeon Charity Hospital, New Orleans, La.

My Dear Doctor:—On the 22nd inst. I received by express a small vial of "Koch's lymph," together with the enclosed communication from the private secretary of his Excellency President Harrison. . . . .

I respectfully tender to the Surgeon in Charge of the Charity Hospital, and through him to the medical and surgicial staff, a portion of the "lymph," for the treatment of the patients in the wards of the Charity Hospital, provided that I be furnished with accurate reports of each and every case thus treated. Respectfully your obedient servant,

JOSEPH JONES, M.D.,
Visiting Physician Charity Hospital.

Charity Hospital, State of Louisiana,
NEW ORLEANS, Jan. 26, 1891.

Prof. JOSEPH JONES, M.D., Visiting Physician Charity Hospital.

My Dear Doctor:—I beg to acknowledge receipt of your favor of the 22nd inst., tendering to the Surgeon in Charge of the Charity Hospital, and through him to the medical and surgical staff, a portion of the lymph which you have received from President Harrison.

Accept my thanks for your courtesy in this matter.

I will inform the members of the medical and surgical staff of your kind offer, and refer to you those who desire to experiment with the lymph in their ward service. Yours very truly,

A. B. MILES,
House Surgeon.

We extract the following from the official proceedings of the Board of Administrators of the Charity Hospital, April, 1891:

Dr. Miles reported relative to "Koch's lymph," in which he said the world was taking interest.

Dr. Joseph Jones had received a vial and tendered it to the hospital. He had placed a notice

on the bulletin board, inviting others to use it in safe bounds, if they thought proper. No one had applied to use it. For himself he did not care to use it yet, as he did not deem the lymph or its substance sufficiently understood. It may yet be used in the hospital, but it would be best to await further results from it.

Assisted by my Chiefs of Clinics Dr. Stanhope Jones and Dr. J. M. Elliott, I examined the cases in the wards under my care in the Charity Hospital daily, up to the middle of March, with a view to the use of "Koch's lymph" in the diagnosis and treatment of phthisis pulmonalis and other forms of tubercular disease.

That this agent or drug was not used in the treatment of diseases under my care in the wards of the Charity Hospital, of New Orleans, was due to the following causes:

a. No case presented itself which I deemed suited to the application of Koch's treatment without danger to the welfare of the patient.

b. No case presented itself of which the diagnosis was so obscure as to require the institution of a doubtful experiment.

c. Without exception the patients under my treatment and care in the wards of the Charity Hospital declined to submit to this mode of treatment.

d. The extensive prevalence of influenza, in a severe and often fatal form, and which attacked with especial violence those suffering with phthisis pulmonalis, rendered the injection of an irritating agent into the living human body hazardous.

In accordance with what I conceived to be the humane and charitable intention of your Excellency, I have held the small vial of "Koch's lymph" sacred to scientific and charitable investigations.

I have received a number of applications from physicians and private individuals for the use of this "Koch's lymph" in private practice and in institutions other than the Charity Hospital of Louisiana, and I have uniformly refused such applications. Such applications appear to have been based upon a misapprehension of the intention of your Excellency, and upon ignorance of the therapeutic value and power of a quantity of liquid too small to supply more than one drop and a half to each one of the fifty-two wards of the Charity Hospital, with a daily average of 550 and an annual average of about 7,000 cases of all diseases.

OUTLINE OF RESULTS OF CHEMICAL AND MICROSCOPICAL EXAMINATION OF THE CONTENTS OF VIAL OF "KOCH'S LYMPH."

The objectives employed in the following observations ranged from one-fifth to one-fifteenth of an inch. Due precautions were taken to secure such results as were possible in the chemical and microscopical manipulation of the small amount of material.

PROPERTIES OF "KOCH'S LYMPH."

1. Reddish brown liquid, with oily movement and consistency of thin glycerine.

2. Clear, with a few minute floculi.

3. Musty odor like that of stale beef extract.

4. When burned in flame of alcohol lamp emits an odor like burning beef extract.

5. Reaction strongly alkaline.

6. When a drop of the undiluted liquid was placed in the eye of a living animal it appeared to cause a disagreeable sensation, attended with closing of the lids temporarily, but it induced no permanent irritation or inflammation.

A repetition of this experiment caused no perceptible injury to the eye or animal.

7. No appreciable effects were induced by the "lymph" when administered internally by the mouth to living animals.

The fluid in its innocuous effects, when applied to living mucous membrane, differed from the poisonous alkaloids, and from hydrocyanic acid and the cyanogen compounds.

8. Mingles rapidly and freely in all proportions with distilled water.

9. When injected with varying degrees of dilution with distilled water (50 per cent., 25 per cent., 10 per cent., 1 per cent. and 0.1 per cent.) into the subcutaneous tissues of living animals, cats, rabbits, and guinea-pigs, only slight local irritation, and no sloughing, was induced at the points of injection. The injections were followed by fever of greater or less intensity and duration. The animals appeared to regain their normal conditions in varying periods of four to seven days, but were reserved for future observations. The liquid appeared to be far inferior in its immediate effects, when injected subcutaneously, to prussic acid, strychnine, and serpent poison. Neither did it manifest effects identical with septic poison.

10. Uncoagulated by heat.

11. Uncoagulated by nitric acid.

12. Uncoagulated by heat and nitric acid.

13. Chemically pure absolute alcohol threw down from the "lymph" a flocculent whitish deposit.

14. Solution of nitrate of silver threw down a heavy white deposit, showing the presence of chlorides in considerable amount.

15. Soluble baryta salts gave slight precipitates.

16. Stannous salts gave no evidence of the presence of the salts of gold.

17. Microscopical examination of the undiluted "Koch's lymph," with objectives ranging from one-fifth to one-fifteenth of an inch, revealed the presence of minute ovoid and rod-shaped bodies, resembling the spores and bacilli of the bacillus tuberculosis, as originally described by the eminent

microscopist, Professor Robert Koch. These microörganisms, in their size, structure, and behavior with staining agents, corresponded with the bacillus tuberculosis.

18. When the "lymph" was diluted with boiled distilled water, and preserved in chemically clean test tubes, the mouths of which were carefully and completely guarded by antiseptic cotton wool, the fluid became turbid. Microscopical examination revealed the fact that the turbidity was due to the multiplication of microörganisms presenting physical and chemical properties similar to those of bacillus tuberculosis.

19. The addition of a drop of the "lymph" to Pasteur's sterilized liquid was followed by the development of the spores and slender rod-shaped organisms resembling the bacillus tuberculosis.

20. The spores and bacilli of "Koch's lymph" were cultivated, with the necessary precautions to exclude all external germs from the atmosphere and external objects, upon various substances or media, as serum, blood, boiled Irish potato, boiled and coagulated white of egg, and boiled aseptic crystallized sugar.

21. The cultivations in fresh blood were strongly alkaline, those of the Irish potato, white of egg and sugar were acid.

22. When a small quantity of the "lymph" was added to a carefully sterilized solution of crystallizable sugar, the clear solution became turbid from the development of bacilli, and emitted a distinct sweetish acid odor, similar to that which I have often observed to be exhaled by patients suffering from phthisis pulmonalis in the advanced stages.

CONCLUSIONS.

a. The active principles of "Koch's lymph" appear to reside in a colloid nitrogenized compound coagulable by absolute alcohol, and in living germs, microörganisms, spores and bacilli, similar to those of the bacillus tuberculosis, and capable of multiplying within and without the living organism.

b. The potent effects of "Koch's lymph" when introduced into the blood of healthy and diseased human beings may be referred in part, at least, to the rapid multiplication and action of microorganisms similar to, if not identical with, the bacillus tuberculosis.

c. The results of the chemical and microscopical examination of the contents of this vial of "Koch's lymph" have led me to exclude this liquid from the list of remedial agents.

I beg to be permitted to say that in the effort to discharge what appeared to be my duty I have endeavored to serve the art, and not the trade of medicine, believing that honorable, legitimate medicine has no secrets to conceal, and holds no remedy which is not the common heritage of the glorious brotherhood of the noble republic of science.

With great respect, and with many thanks for the generous consideration of your Excellency, I have the honor to remain your obedient servant,

JOSEPH JONES, M.D.

Letter from Dr. W. H. Daly, Pittsburgh, Pa.

To the Editor:—Replying to a letter on page 647, May 2, 1891, of THE JOURNAL of the Association, permit me to say, that at the last meeting of the Association in Nashville, I was invited to open the discussion on the medical treatment of diphtheria.

The time limit is *ten* minutes; I occupied but *six*, as can be verified by reading my remarks in THE JOURNAL of October 11, 1890. Now it is scarcely possible for one to be exhaustive on that subject, in so short a time. Much must be omitted, and I omitted much. Yet there was probably not a person who did me the honor to listen to me at the meeting, nor one who read my remarks in THE JOURNAL of the Association, with the possible exception of Dr. Kornig, who did not fully know and understand that I had already in the paper to which I referred, not only again drawn the attention of the profession to the value of the calomel treatment of diphtheria under the title of "the simplest and most efficient treatment of diphtheria," which I read before the congress of the American Laryngological Association in Philadelphia in 1886. A reprint of that article, I beg herewith to hand you, that you may see the following quotations are unmistakably correct.

You will see that I therein stated the plan was *not new* and in verification I quoted a case of the child of the celebrated author, Divine and wit, Rev. Sydney Smith, who was treated by Dr. Hamilton in 1797 in Edinburg, Scotland, by administering 2 grains of calomel every hour—the child recovering.

You will see that I further gave my deceased friend, Dr. M. C. Reiter of Pittsburgh, full credit, which is well known not only to the estimable family of Dr. Reiter, but to the entire profession (unless possibly to the writer of that letter in the last issue of THE JOURNAL). I now quote from my remarks in that paper.

"Now, briefly, as to the credit for the practice of the calomel treatment of diphtheria in modern medicine. To Dr. William C. Reiter, of Pittsburgh, a gentlemen who was learned in other sciences as well as in medicine, this credit is due. He was the apostle of this plan of treatment of diphtheria, and he for many years persistently practiced the treatment, and promulgated the doctrine to his brethren, many of whom were at first unbelievers; he was an earnest and honest observer, fearless in the practice and assertion of what he deemed right. He had large experience and ripe judgment, and, as he stood for many years almost alone in the advocacy of the

plan, he deserves still more our respectful praise and free acknowledgment.

"In medical works the various mercurial plans of treatment are mentioned, of late years, without, so far as I have observed, according to Dr. Reiter, the credit of having advocated and practiced the method of treating diphtheria by the exhibition of calomel. I regard all the other mercurial preparations as mere excuses or ineligible substitutes for this best of all mercurials in diphtheria —viz., calomel. To any one caring to see the brochure of Dr. Reiter, which is little known of, and is so peculiar in its style as to entitle it to be considered an oddity in medical literature, I will say that it was published by J. B. Lippincott & Co., in 1878, and is entitled "A Monograph on the Treatment of Diphtheria based upon a New Etiology and Pathology," by William C. Reiter, A. M., M.D."

The widest publicity was given to that paper, through the kind consideration of the medical press, and it was reprinted in extenso in several American and European journals, and in some of the latter in an abbreviated form. There were also 3,000 reprints, sent to members of the profession, especially to my fellow members of the Allegheny Co. Medical Society, of which the writer of that letter was then a member. Consequently, my disavowal of originality in the matter, as well as my just encomiums upon my deceased friend were *well* published, and *well* known, and I cannot understand how Dr. Kornig, whose name is advertised in the columns of a medical journal as a co-editor, could have failed to have read the article somewhere.

The readers of THE JOURNAL of the Association have probably all heard of the man "who on first hearing the story of the Crucifixion, hit the first Jew on the nose that he happened to meet thereafter, and on being remonstrated with, in that the event had occurred nearly 2000 years ago, justified himself on the ground that he had just heard of it, and was determined to wreak retribution."

The readers of that letter can scarcely have failed to have also *read between the lines*, and discovered a lurking animus. Altogether it presents another case of a man who has sat down with no chair behind him. Very respectfully,

W. H. DALY.

135 5th Ave, Pittsburgh, Pa.

MISCELLANY.

OHIO STATE MEDICAL SOCIETY.—Forty-sixth Annual Meeting at Sandusky, Ohio, June 17, 18, and 19, 1891.

Officers.—President, W. J. Conklin, Dayton. Vice-Presidents: D. N. Kinsman, Columbus; B. L. Millikin, Cleveland; D. J. Snyder, Scio; Orpheus Everts, College Hill. Secretary, G. A. Collamore, Toledo. Assistant Secretary, J. A. Spence, New Philadelphia. Treasurer and Librarian, T. W. Jones, Columbus.

Committee of Arrangements.—S. S. Thorn, A. J. Gawne, H. A. Tobey, Wm. Caldwell, F. D. Bain.

First Session—Wednesday, June 17.—1. Call to order.

2. Report of Committee of Arrangements.

3. Business which requires early consideration.

4. Annual Reports of Treasurer, Librarian and Secretary.

5. Reports of Standing Committees: Committee on Admissions and Medical Societies. Committee on Finance. Committee on Publication. Committee on Legislation. Committee on Ethics.

6. Reports of Special Committees: Committee on "Act providing for the Protection of Physicians, etc." P. S. Conner, Chairman. Committee on Organization of County Societies and their Relation to the State Medical Society. T. A. Reamy, Chairman.

7. Reports from Delegates to the American Medical Association and other Societies.

8. Appointment of Committee on Nominations.

9. Papers: "The Surgical Treatment of Chronic Catarrhal Appendicitis:" R. Harvey Reed, Mansfield. "Notes on the Treatment of Syphilis:" W. T. Corlett, Cleveland. "A Plea for a More Extended Supervision of the Parturient Woman:" D. R. Silver, Sidney. "Hernia:" Dudley P. Allen, Cleveland.

Evening Session.—1. Papers: "Carcinoma, a form of Perverted Nutrition:" H. J. Herrick, Cleveland. "A Rare Case of Pelvic Dropsy; Operation; Cure:" J. F. Baldwin, Columbus. "Spinal Supports:" S. L. McCurdy, Dennison. "Compound Ganglia; Treatment by Operation:" C. S. Hamilton, Columbus. "Three Cases Radical Cure of Hernia by the Use of the Buried Antiseptic Animal Suture:" F. C. Larimore, Mt. Vernon.

Tuesday, June 18—Morning Session.—1. Reports of Committees.

2. Papers: "A. C. E. Mixture:" J. C. Reeve, Dayton. "Anæsthetics; the Dangers in the Use of Chloroform as compared with Sulphuric Ether:" E. H. Hyatt, Delaware. "Tuberculin in the Treatment of Tuberculosis:" J. T. Whittaker, Cincinnati. "Influenza:" D. N. Kinsman, Columbus. "Convergent Squint and its Cure:" C. W. Tangeman, Cincinnati. "Some Facts every Practitioner ought to know about Squint:" A. R. Baker, Cleveland. "The Treatment of Retention from Hypertrophy of Prostate:" N. P. Dandridge, Cincinnati. "Fracture of Dorsal Vertebræ:" A. W. Ridenour, Massillon.

Afternoon Session.—1. Reports of Committees.

2. Election of Officers.

3. Selection of the Place for the next Meeting.

4. Papers: "Report of Cases, with Comments:" T. A. Reamy, Cincinnati. "Removal of Uterine Appendages; Supplemental Report:" R. B. Hall, Cincinnati. "Operative Treatment of Uterine Cancer:" D. Tod Gilliam, Columbus. "High Amputation of Cervix:" B. F. Hart, Marietta. "Cases of Extra-Uterine Gestation:" W. D. Hamilton and C. S. Hamilton, Columbus. "The Value of Draining the Pelvis, in Case of Bleeding after Operation:" M. Stamm, Fremont.

Evening Session.—President's Address. "A Page of Medical History; Moliere and the Doctors:" W. J. Conklin, Dayton.

Friday, June 19—Morning Session.—1. Reports of Committees.

2. Papers: "Modern Methods of Treatment for Nose and Throat Diseases accessible to the General Practitioner:" Jas. E. Nichols, N. Y. City. "Tonsillotomy and After-Treatment:" T. V. Fitzpatrick, Cincinnati. "Intubation:" Geo. Goodhue, Dayton. "Papilloma of Larynx; Case:" A. B. Thrasher, Cincinnati. "Exploratory Incisions of Knee Joints:" B. Merrill Ricketts, Cincinnati. "Gonorrhœa in Women:" C. N. Smith, Toledo. "Home *versus* Hospital Treatment of the Insane:" A. B. Richardson, Cincinnati.

Afternoon Session.—1. Reports of Committees.

2. Papers: "Hyperemesis Gravidarum:" W. A. Dickey, Tiffin. "Tests for Albumen:" W. B. Davis, Cincinnati. "The Limitations of Dermatology:" Edward Preble, Cleveland. "Spinal Concussion:" G. W. Crile, Cleveland. "Salpingitis; with a Report of two Cases:" A. B. Walker, Canton. Volunteer Papers.

3. Oral Communications.
4. New Business.
5. Unfinished and Miscellaneous Business.

As the program contains a large number of papers, the attention of readers is called to Section V, of By-Laws: "Not to exceed thirty minutes shall be allowed for the reading of any paper."

The Sessions of the Society will be held at the Hall corner Washington Row and Jackson Street; first Session at 2 P.M., Wednesday, June 17.

Hotels.—West House; Sloane House, $2.00 and upward per day.

DR. SAMUEL O. L. POTTER, Professor of Medicine in the Cooper Medical College of San Francisco, and a graduate of Jefferson Medical College of Philadelphia (with first prize, '82), recently passed the required examination and was admitted on April 30 last, a Member of the Royal College of Physicians of London, forming one of a class of nine candidates, all of which were M.D.'s of British Universities, viz.: three of Cambridge, one of Oxford, one of Edinburgh, two of London, one of Aberdeen.

Those who understand the peculiar rank of British qualifications will recognize the M.R.C.P. of London as the "hall-mark" of the British medical profession, and that it is a coveted one may be seen from the fact that all the candidates therefor were previous M.D.'s or M.B.'s of universities—asking this as an additional honor. The qualification of this college given at the ordinary final examination of students is the license, "L.R.C.P." London, and does not admit, as does the membership, to the college itself.

The only other Americans holding this qualification are Prof. Osler, of Baltimore, and Dr. Robinson, of San Francisco. It is also held by two English practitioners in California, and one in Washington, one in Canada, and one in British Columbia.

We understand that Dr. Potter left his bed in convalescence from broncho-pneumonia to undergo the examinations of the week ending April 30, and that he has since had a relapse and is dangerously ill.

OFFICERS OF KANSAS STATE MEDICAL SOCIETY for ensuing year: President—J. E. Oldham, M.D., Wichita, Kan.; First Vice-President—A. H. Cordier, M.D., McPherson, Kan.; Second Vice-President—J. T. Axtell, M.D., Newton, Kan.; Treasurer—L. A. Buck, M.D., Peabody, Kan.; Secretary—W. S. Lindsay, M.D., Topeka, Kan. Next place of meeting, Ft. Scott, May, 1892.

THE SOUNDS OF COLORS.—A beam of sunlight is made to pass through a prism so as to produce the solar spectrum or rainbow. A disc, having slits or openings in it, is made to revolve, and the colored light of the rainbow is made to break through it and fall on silk, wool, or other material contained in a glass vessel. As the colored light falls upon it, sounds will be given by the different parts of the spectrum, and there will be silence in other parts. If the vessel contains red worsted, and the green light flashes upon it, loud sounds will be given. Only feeble sounds will be heard when the red and blue parts of the rainbow fall upon the vessel.—*Times and Register.*

IMPORTANT IMPROVEMENT IN MICROSCOPIC LENSES.—It is stated that an immense improvement has recently been effected in the manufacture of glass for optical instruments, by means of the addition to the ordinary materials of phosphorus and chlorine, which in some, as yet unexplained, way cause the glass to be very much more transparent, and enable it to receive a much higher degree of polish than any optical glass hitherto manufactured. Thus microscopes can be made which will render objects of the diameter of only the one-eight millionth of a millimetre visible, whereas with the best instruments now in use the diameter of the smallest object that can be seen is one-sixteenth thousandth of a millimetre.—*Lancet.*

THE AMERICAN MEDICAL ASSOCIATION.—The meeting of the Association which has just closed at Washington, was in many ways a success. With such a man as Dr. Briggs in the chair, and master minds like Shurly and Mathews, to give the principal addresses, the general sessions could not but be interesting. Those who have read the thoughtful addresses already published must feel proud of the men who can so grace our guild by word and deed.

The reports of the sections are not as yet ready, but it is safe to anticipate their reception, and say that each year there is a growing demand for more and better work in each section. Sometimes, indeed, it seems that the main drift of the Association is political, that the main chance is with the committee on nominations and the chief prizes are the leading offices; just then some grand work will be announced, some reliable conclusion given, or some valuable research reported and the scientific worth of the Association will again be in the ascendency.

Thus, as in all progress, there is an ebb and flow and we are satisfied if only the tides does not run too low, as it sometimes threatens to do. We confidently believe, however, in the great field of usefulness which the American Medical Association is to occupy. Some changes must be made for the greater economy of time and the proper selection of material; some advantages may be gained by the formation of local branches, and some new enthusiasm aroused by holding out inducements for scientific research and original investigation.

The American profession is pledged to the support of the American Medical Association and there must be its hindrance to its progress and no prostitution of no purposes.—Editorial in *The St. Louis Clinique.*

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from May 16, 1891, to May 22, 1891.

Capt. Marshall W. Woods, Asst. Surgeon U. S. A., is hereby granted leave of absence for one month, to commence on or about the 23d inst. Par. 1, S. O. 104, Div. Atlantic, May 20, 1891.

Capt. George McCreery, Asst. Surgeon, is relieved from duty at Ft. Clarke, Tex., and will report in person to the commanding officer, Ft. McIntosh, Tex., for duty at that post. By direction of the Secretary of War. Par. 4, S. O. 114, A. G. O., May 19, 1891.

Capt. William B. Banister, Asst. Surgeon, is assigned to duty as medical officer with Troop B, Sixth Cavalry, while *en route* from Ft Myer, Va., to Ft. Washakie, Wyo. On arrival of the troop at its destination, Capt. Banister will return to his station at Washington Bks. Par. 3, S. O. 104, Div. Atlantic, May 20, 1891.

Capt. John A. Skinner, Asst. Surgeon U. S. A., Ft. Davis, Tex., will proceed at once to Ft. Clarke, Tex., and report to the commanding officer for temporary duty. Par. 1, S. O. 44, Dept. of Texas, May 13, 1891.

By direction of the Secretary of War, the following assignments of recently appointed medical officers are ordered: First Lieut. William F. Lippitt, Jr., Asst. Surgeon, will report in person to the commanding officer, Ft. McPherson, Ga. First Lieut. Benjamin Brooke, Asst. Surgeon, will report in person to the commanding officer, Ft. Riley, Kan. First Lieut. Meritte W. Ireland, Asst. Surgeon, will proceed from Columbia City, Ind., to Jefferson Bks., Mo., and report in person for duty to the commanding officer of that post. First Lieut. George M. Wells, Asst. Surgeon, will proceed from Paoli, Ind., to Columbus Bks., O., and report in person for duty to the commanding officer of that post. Par. 7, S. O. 115, A. G. O., May 20, 1891.

Official List of Changes in the Medical Corps of the U. S. Navy, for the Week Ending May 23, 1891.

Surgeon Geo. A. Bright, detached from U. S. S. "Omaha," and granted three months' leave of absence.

P. A. Surgeon V. C. B. Means, detached from U. S. S. "Omaha" and granted three months' leave of absence.

Asst. Surgeon Jas. F. Keeney, ordered for examination preliminary to promotion to P. A. Surgeon.